

L Number	Hits	Search Text	DB	Time stamp
1	301474	cellulose	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:13
2	39795	cellulose and cross ADJ link\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:13
3	1926	(cellulose and cross ADJ link\$) and chiral	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:13
4	1190	((cellulose and cross ADJ link\$) and chiral) and support	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:13
5	1043	((((cellulose and cross ADJ link\$) and chiral) and support) and alkyl	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:14
6	1016	(((((cellulose and cross ADJ link\$) and chiral) and support) and alkyl) and process	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:14
7	524	((((((cellulose and cross ADJ link\$) and chiral) and support) and alkyl) and process) and silyl\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:23
8	2	"9627639"	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:26
9	0	"9627639" and chiral	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:25
10	2	"9627615"	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:28
11	13	"4737488"	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:30
12	2040975	compound	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:30
13	30740	compound and chiral	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:31
14	7362	(compound and chiral) and support	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:31
16	2182	((compound and chiral) and support) and (silyl\$ or hydrosilyl\$)	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:32
17	1888	((((compound and chiral) and support) and (silyl\$ or hydrosilyl\$)) and chromatog\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:32

18	1887	(((compound and chiral) and support) and (silyl\$ or hydrosilyl\$)) and chromatog\$) and (synthe\$ or proces or method)	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:33
19	1887	(((compound and chiral) and support) and (silyl\$ or hydrosilyl\$)) and chromatog\$) and (synthe\$ or process or method)	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:33
20	668	(((compound and chiral) and support) and (silyl\$ or hydrosilyl\$)) and chromatog\$) and (synthe\$ or process or method)) and cross ADJ link\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:39
21	2082	536/22.1	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:40
22	511	536/22.1 and cross ADJ link\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:40
23	62	(536/22.1 and cross ADJ link\$) and chiral	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:41
24	1010	536/53	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:41
25	46	536/53 and chiral	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:41
26	11	(536/53 and chiral) and cross ADJ link\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:43
27	295	polysaccharide	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:43
28	63397	polysaccharide	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:43
29	15080	polysaccharide and cross ADJ link\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:43
30	777	(polysaccharide and cross ADJ link\$) and chiral	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:44
33	371	(((polysaccharide and cross ADJ link\$) and chiral) and support\$) and chromatog\$) and (silyl\$ or hydrosilyl\$)	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:50
34	457	514/42	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:50
36	6	(514/42 and chiral) and cross ADJ link\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:50
35	54	514/42 and chiral	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:51

32	642	(((polysaccharide and cross ADJ link\$) and chiral) and support\$) and chromatog\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:59
37	366	562/471	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 10:59
38	27	562/471 and chiral	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 11:01
39	2	(562/471 and chiral) and cross ADJ link\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 11:01
31	663	((polysaccharide and cross ADJ link\$) and chiral) and support\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 11:07
40	2	"9627639"	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 11:08
41	10	"5354852"	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 11:11
42	0	"5354852" and cross ADJ link\$	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 11:11
43	5	"5354852" and chiral	USPAT; US-PGPUB; EPO; DERWENT	2003/11/11 11:12

# Inventor Search

KRISHNAN 09/541,690

=> d que

L1 95 SEA FILE=HCAPLUS ABB=ON PLU=ON DUVAL R?/AU  
L2 15 SEA FILE=HCAPLUS ABB=ON PLU=ON LEVEQUE H?/AU  
L3 102 SEA FILE=HCAPLUS ABB=ON PLU=ON (L1 OR L2)  
L4 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND CHIRAL  
L5 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 AND PATENT/DT  
L6 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L5 AND CROSS-LINK?  
L7 48 SEA FILE=REGISTRY ABB=ON PLU=ON (170211-41-3/BI OR 10025-78-2  
/BI OR 112-43-6/BI OR 119-53-9/BI OR 120-47-8/BI OR 123598-41-4  
/BI OR 130747-08-9/BI OR 13523-86-9/BI OR 1439-07-2/BI OR  
17002-31-2/BI OR 18531-94-7/BI OR 18531-99-2/BI OR 25144-18-7/B  
I OR 26164-26-1/BI OR 26328-11-0/BI OR 27439-12-9/BI OR  
38460-95-6/BI OR 3966-32-3/BI OR 40102-60-1/BI OR 4420-74-0/BI  
OR 487-26-3/BI OR 51148-67-5/BI OR 53531-34-3/BI OR 54132-75-1/  
BI OR 54724-00-4/BI OR 59100-95-7/BI OR 5928-66-5/BI OR  
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OR 68374-35-6/BI OR 7021-09-2/BI OR 7585-39-9/BI OR 7631-86-9/B  
I OR 9004-34-6/BI OR 9004-54-0/BI OR 9005-80-5/BI OR 9012-76-4/  
BI OR 9051-95-0/BI OR 9051-97-2/BI OR 9051-99-4/BI OR 9052-06-6  
/BI OR 9057-02-7/BI OR 9063-63-2/BI OR 92880-82-5/BI OR  
98-59-9/BI OR 998-30-1/BI)

~~L9 SEA FILE=HCAPLUS ABB=ON PLU=ON L7 AND L6~~

1 patent w/ 48 cpds  
displayed

=&gt; d ibib abs hitstr ind

~~119-53-9~~ ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:369012 HCAPLUS  
 DOCUMENT NUMBER: 136:379289  
 TITLE: Chloro-, hydroxy- and alkoxysilane derivatives of polysaccharides or oligosaccharides, polymerizable and **cross-linkable**, their synthesis and their use as sources of novel support materials  
 INVENTOR(S): Duval, Raphael  
 PATENT ASSIGNEE(S): Institut Francais du Petrole, Fr.; Chiralsep  
 SOURCE: U.S. Pat. Appl. Publ., 19 pp., Cont.-in-part of U.S. Ser. No. 394,868.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002058763	A1	20020516	US 2001-808190	20010315
US 6514407	B2	20030204		
FR 2784109	A1	20000407	FR 1998-11377	19980911
US 6346616	B1	20020212	US 1999-394868	19990913
PRIORITY APPLN. INFO.:			FR 1998-11377 A	19980911
			US 1999-394868 A2	19990913

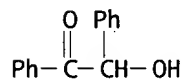
AB There are described chloro-, hydroxy- and alkoxysilane derivs. of polysaccharides or oligosaccharides as novel compds. which are polymerizable and **cross-linkable**, and a method for obtaining them; novel support materials obtained from said derivs. and contg. said silane derivs. of polysaccharides or oligosaccharides chem. grafted by a covalent bond with the support and polymd. and **cross-linked** in a three-dimensional network and a method for obtaining them; as well as the use of said material supports in sepn. or in prepn. of enantiomers, through employment in gaseous, liq. or supercrit. chromatog., by electrophoresis, electrochromatog. or by percolation processes through membranes contg. said support materials.

IT 119-53-9, Benzoin 487-26-3, Flavanone 1439-07-2, Trans-Stilbene oxide 3966-32-3, (R)-.alpha.-Methoxyphenyl acetic acid 5928-66-5, (R)-Benzoin 5928-67-6, (S)-Benzoin 7021-09-2, .alpha.-Methoxyphenyl acetic acid 13523-86-9, Pindolol 17002-31-2, (-)-Flavanone 25144-18-7, (+)-Trans-Stilbene oxide 26164-26-1, (S)-.alpha.-Methoxyphenyl acetic acid 26328-11-0, (S)-Pindolol 27439-12-9, (+)-Flavanone 40102-60-1, (-)-Trans-Stilbene oxide 68374-35-6, (R)-Pindolol

RL: ANT (Analyte); ANST (Analytical study)  
 (chloro-, hydroxy- and alkoxysilane derivs. of polysaccharides or oligosaccharides, polymerizable and **cross-linkable**, synthesis and use as sources of novel support materials in **chiral** sepn.)

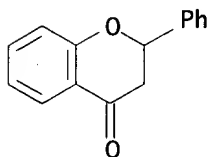
RN 119-53-9 HCAPLUS

CN Ethanone, 2-hydroxy-1,2-diphenyl- (9CI) (CA INDEX NAME)



RN 487-26-3 HCAPLUS

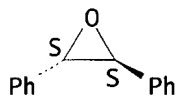
CN 4H-1-Benzopyran-4-one, 2,3-dihydro-2-phenyl- (9CI) (CA INDEX NAME)



RN 1439-07-2 HCAPLUS

CN Oxirane, 2,3-diphenyl-, (2R,3R)-rel- (9CI) (CA INDEX NAME)

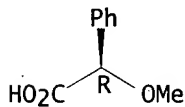
Relative stereochemistry.



RN 3966-32-3 HCAPLUS

CN Benzeneacetic acid, .alpha.-methoxy-, (.alpha.R)- (9CI) (CA INDEX NAME)

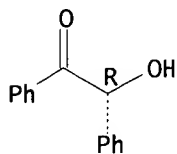
Absolute stereochemistry. Rotation (-).



RN 5928-66-5 HCAPLUS

CN Ethanone, 2-hydroxy-1,2-diphenyl-, (2R)- (9CI) (CA INDEX NAME)

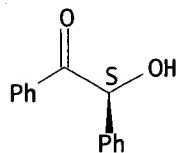
Absolute stereochemistry. Rotation (-).



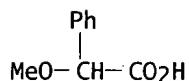
RN 5928-67-6 HCAPLUS

CN Ethanone, 2-hydroxy-1,2-diphenyl-, (2S)- (9CI) (CA INDEX NAME)

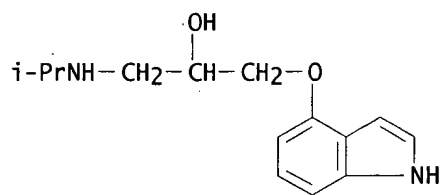
Absolute stereochemistry. Rotation (+).



RN 7021-09-2 HCAPLUS  
 CN Benzeneacetic acid, .alpha.-methoxy- (9CI) (CA INDEX NAME)

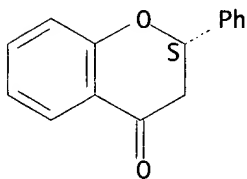


RN 13523-86-9 HCAPLUS  
 CN 2-Propanol, 1-(1H-indol-4-yloxy)-3-[(1-methylethyl)amino]- (9CI) (CA INDEX NAME)



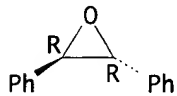
RN 17002-31-2 HCAPLUS  
 CN 4H-1-Benzopyran-4-one, 2,3-dihydro-2-phenyl-, (2S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



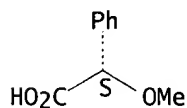
RN 25144-18-7 HCAPLUS  
 CN Oxirane, 2,3-diphenyl-, (2R,3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



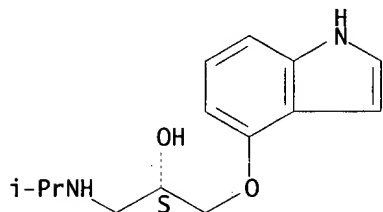
RN 26164-26-1 HCAPLUS  
 CN Benzeneacetic acid, .alpha.-methoxy-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 26328-11-0 HCAPLUS  
 CN 2-Propanol, 1-(1H-indol-4-yloxy)-3-[(1-methylethyl)amino]-, (2S)- (9CI) (CA INDEX NAME)

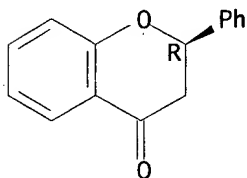
Absolute stereochemistry.



RN 27439-12-9 HCAPLUS

CN 4H-1-Benzopyran-4-one, 2,3-dihydro-2-phenyl-, (2R)- (9CI) (CA INDEX NAME)

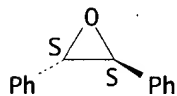
Absolute stereochemistry. Rotation (+).



RN 40102-60-1 HCAPLUS

CN Oxirane, 2,3-diphenyl-, (2S,3S)- (9CI) (CA INDEX NAME)

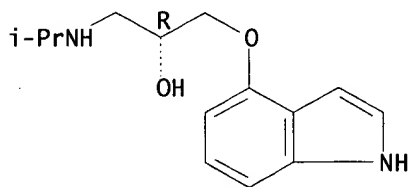
Absolute stereochemistry. Rotation (-).



RN 68374-35-6 HCAPLUS

CN 2-Propanol, 1-(1H-indol-4-yloxy)-3-[(1-methylethyl)amino]-, (2R)- (9CI)  
(CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 98-59-9, 4-Methylbenzene sulfonyl chloride 112-43-6,

10-Undecen-1-ol 120-47-8, Ethyl 4-hydroxybenzoate

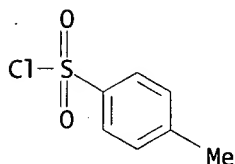
4420-74-0, 3-Mercaptopropyltrimethoxysilane 38460-95-6,

10-Undecenoyl chloride 54132-75-1, 3,5-Dimethylphenyl isocyanate

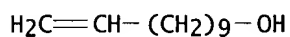
RL: RCT (Reactant); RACT (Reactant or reagent)

(chloro-, hydroxy- and alkoxy-silane derivs. of polysaccharides or oligosaccharides, polymerizable and cross-linkable, synthesis and use as sources of novel support materials in chiral sepn.)

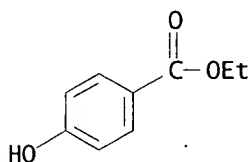
RN 98-59-9 HCAPLUS  
 CN Benzenesulfonyl chloride, 4-methyl- (9CI) (CA INDEX NAME)



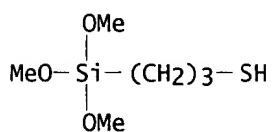
RN 112-43-6 HCAPLUS  
 CN 10-Undecen-1-ol (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



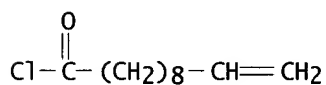
RN 120-47-8 HCAPLUS  
 CN Benzoic acid, 4-hydroxy-, ethyl ester (9CI) (CA INDEX NAME)



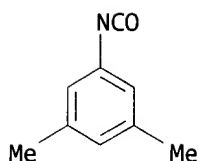
RN 4420-74-0 HCAPLUS  
 CN 1-Propanethiol, 3-(trimethoxysilyl)- (7CI, 8CI, 9CI) (CA INDEX NAME)



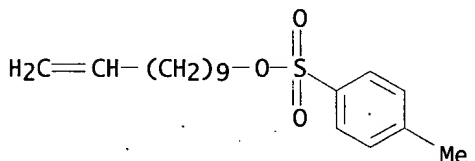
RN 38460-95-6 HCAPLUS  
 CN 10-Undecenoyl chloride (6CI, 7CI, 9CI) (CA INDEX NAME)



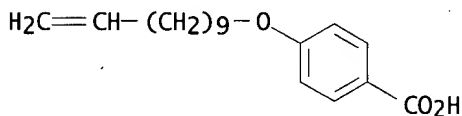
RN 54132-75-1 HCAPLUS  
 CN Benzene, 1-isocyanato-3,5-dimethyl- (9CI) (CA INDEX NAME)



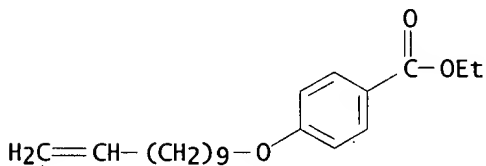
IT 51148-67-5P 59100-95-7P, 4-(10-Undecenyl)benzoic acid  
 123598-41-4P, Ethyl 4-(10-undecenyl) benzoate  
 130747-08-9P, 4-(10-Undecenyl)benzoyl chloride  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (chloro-, hydroxy- and alkoxy-silane derivs. of polysaccharides or  
 oligosaccharides, polymerizable and **cross-linkable**,  
 synthesis and use as sources of novel support materials in  
**chiral** sepn.)  
 RN 51148-67-5 HCAPLUS  
 CN 10-Undecen-1-ol, 4-methylbenzenesulfonate (9CI) (CA INDEX NAME)



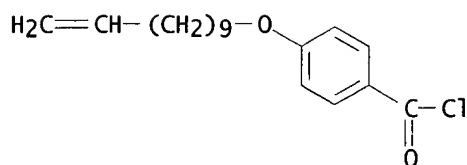
RN 59100-95-7 HCAPLUS  
 CN Benzoic acid, 4-(10-undecenyl)- (9CI) (CA INDEX NAME)



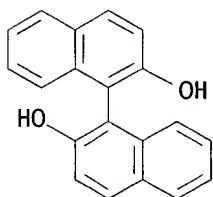
RN 123598-41-4 HCAPLUS  
 CN Benzoic acid, 4-(10-undecenyl)-, ethyl ester (9CI) (CA INDEX NAME)



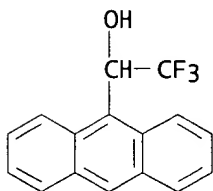
RN 130747-08-9 HCAPLUS  
 CN Benzoyl chloride, 4-(10-undecenyl)- (9CI) (CA INDEX NAME)



IT **602-09-5P**, [1,1'-Binaphthalene]-2,2'-diol **65487-67-4P**,  
 9-Anthracenemethanol, ..alpha..-(trifluoromethyl)-  
 RL: PUR (Purification or recovery); PREP (Preparation)  
 (enantiomeric sepn. of; chloro-, hydroxy- and alkoxy-silane derivs. of  
 polysaccharides or oligosaccharides, polymerizable and **cross-**  
**linkable**, synthesis and use as sources of novel support  
 materials in **chiral** sepn.)  
 RN 602-09-5 HCAPLUS  
 CN [1,1'-Binaphthalene]-2,2'-diol (8CI, 9CI) (CA INDEX NAME)



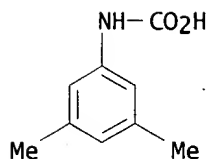
RN 65487-67-4 HCAPLUS  
 CN 9-Anthracenemethanol, .alpha..-(trifluoromethyl)- (9CI) (CA INDEX NAME)



IT **170211-41-3P**, Cellulose, (3,5-dimethylphenyl)carbamate  
 10-undecenoate  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (prepn. and functionalization of; chloro-, hydroxy- and alkoxy-silane  
 derivs. of polysaccharides or oligosaccharides, polymerizable and  
**cross-linkable**, synthesis and use as sources of novel  
 support materials in **chiral** sepn.)  
 RN 170211-41-3 HCAPLUS  
 CN Cellulose, (3,5-dimethylphenyl)carbamate 10-undecenoate (9CI) (CA INDEX  
 NAME)

CM 1

CRN 161859-22-9  
 CMF C9 H11 N O2



CM 2

CRN 9004-34-6  
 CMF Unspecified  
 CCI PMS, MAN

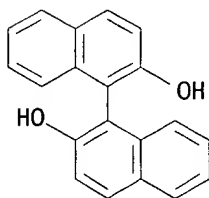
\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

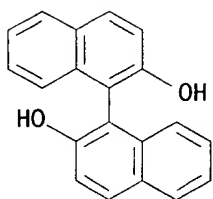
CRN 112-38-9  
 CMF C11 H20 O2



IT 18531-94-7P, [1,1'-Binaphthalene]-2,2'-diol, (1R)-  
 18531-99-2P, [1,1'-Binaphthalene]-2,2'-diol, (1S)-  
 53531-34-3P, 9-Anthracenemethanol, .alpha.-(trifluoromethyl)-,  
 (.alpha.R)- 60646-30-2P, 9-Anthracenemethanol,  
 ..alpha..-(trifluoromethyl)-, (S)-  
 RL: PUR (Purification or recovery); PREP (Preparation)  
 (sepn. of, from racemic mixts.; chloro-, hydroxy- and alkoxy-  
 silane derivs. of polysaccharides or oligosaccharides, polymerizable and  
**cross-linkable**, synthesis and use as sources of novel  
 support materials in **chiral** sepn.)  
 RN 18531-94-7 HCAPLUS  
 CN [1,1'-Binaphthalene]-2,2'-diol, (1R)- (9CI) (CA INDEX NAME)



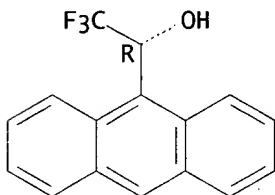
RN 18531-99-2 HCAPLUS  
 CN [1,1'-Binaphthalene]-2,2'-diol, (1S)- (9CI) (CA INDEX NAME)



RN 53531-34-3 HCAPLUS

CN 9-Anthracenemethanol, .alpha.-(trifluoromethyl)-, (.alpha.R)- (9CI) (CA INDEX NAME)

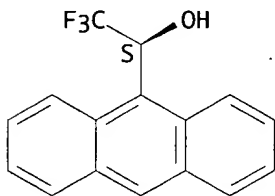
Absolute stereochemistry. Rotation (-).



RN 60646-30-2 HCAPLUS

CN 9-Anthracenemethanol, .alpha.-(trifluoromethyl)-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

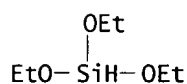


IT **998-30-1DP**, Triethoxysilane, reaction products with silica and cellulose (dimethylphenyl)carbamate undecenoate **7585-39-9DP**, .beta.-Cyclodextrin, derivs., reaction products with silica and functionalized silanes **7631-86-9DP**, Silica, reaction products with functionalized silanes and cellulose (dimethylphenyl)carbamate undecenoate **9004-34-6DP**, Cellulose, derivs., reaction products with silica and functionalized silanes **9004-54-0DP**, Dextran, derivs., reaction products with silica and functionalized silanes **9005-80-5DP**, Inulin, derivs., reaction products with silica and functionalized silanes **9012-76-4DP**, Chitosan, derivs., reaction products with silica and functionalized silanes **9051-95-0DP**, .alpha.-1,3-Glucan, derivs., reaction products with silica and functionalized silanes **9051-97-2DP**, .beta.-D-Glucan, (1.fwdarw.3)-, derivs., reaction products with silica and functionalized silanes **9051-99-4DP**, .beta.-1,2-Glucan, derivs., reaction products with silica and functionalized silanes **9052-06-6DP**, .beta.-D-Mannan, (1.fwdarw.4)-, derivs., reaction products with silica and functionalized silanes **9057-02-7DP**, Pullulan, derivs., reaction products with silica and functionalized silanes **9063-63-2DP**, .beta.-D-Xylan, (1.fwdarw.4)-, derivs., reaction products with silica and

functionalized silanes **10025-78-2DP**, Trichlorosilane, reaction products with silica and cellulose (dimethylphenyl)carbamate undecenoate **54724-00-4DP**, Curdlan, derivs., reaction products with silica and functionalized silanes **92880-82-5DP**, .beta.-D-Fructan, (2.fwdarw.1)-, derivs., reaction products with silica and functionalized silanes **170211-41-3DP**, Cellulose, (3,5-dimethylphenyl)carbamate 10-undecenoate, reaction products with silica and functionalized silanes  
 RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (supports; chloro-, hydroxy- and alkoxy-silane derivs. of polysaccharides or oligosaccharides, polymerizable and **cross-linkable**, synthesis and use as sources of novel support materials in **chiral** sepn.)

RN 998-30-1 HCAPLUS

CN Silane, triethoxy- (6CI, 8CI, 9CI) (CA INDEX NAME)

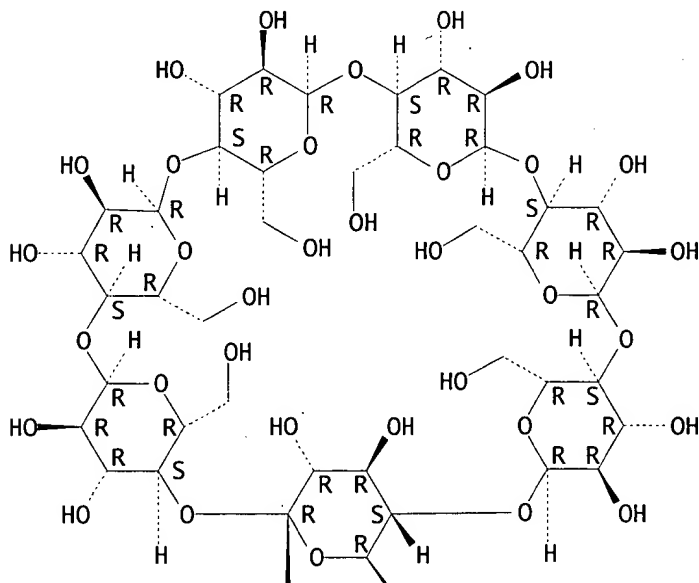


RN 7585-39-9 HCAPLUS

CN .beta.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

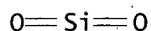
PAGE 1-A



PAGE 2-A



RN 7631-86-9 HCAPLUS  
 CN Silica (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



RN 9004-34-6 HCAPLUS  
 CN Cellulose (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9004-54-0 HCAPLUS  
 CN Dextran (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9005-80-5 HCAPLUS  
 CN Inulin (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9012-76-4 HCAPLUS  
 CN Chitosan (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9051-95-0 HCAPLUS  
 CN .alpha.-D-Glucan, (1.fwdarw.3)- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9051-97-2 HCAPLUS  
 CN .beta.-D-Glucan, (1.fwdarw.3)- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9051-99-4 HCAPLUS  
 CN .beta.-D-Glucan, (1.fwdarw.2)- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9052-06-6 HCAPLUS  
 CN .beta.-D-Mannan, (1.fwdarw.4)- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

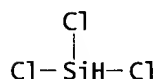
RN 9057-02-7 HCAPLUS  
 CN Pullulan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9063-63-2 HCAPLUS  
 CN .beta.-D-Xylan, (1.fwdarw.4)- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 10025-78-2 HCAPLUS  
 CN Silane, trichloro- (8CI, 9CI) (CA INDEX NAME)



RN 54724-00-4 HCAPLUS  
 CN Curdlan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 92880-82-5 HCAPLUS

CN .beta.-D-Fructan, (2.fwdarw.1)- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

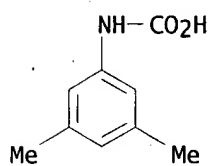
RN 170211-41-3 HCAPLUS

CN Cellulose, (3,5-dimethylphenyl)carbamate 10-undecenoate (9CI) (CA INDEX NAME)

CM 1

CRN 161859-22-9

CMF C9 H11 N O2



CM 2

CRN 9004-34-6

CMF Unspecified

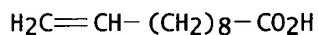
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 3

CRN 112-38-9

CMF C11 H20 O2



IC ICM C07H001-00

NCL 526123100

CC 80-3 (Organic Analytical Chemistry)

Section cross-reference(s): 43

ST chloro hydroxy alkoxy silane deriv polysaccharide oligosaccharide  
polymerizable stationary phase; silane functionalized polysaccharide  
**chiral** sepn; cellulose deriv silane functionalized **chiral**  
support

IT Chromatographic stationary phases

HPLC

Silylation

(chloro-, hydroxy- and alkoxy silane derivs. of polysaccharides or  
oligosaccharides, polymerizable and **cross-linkable**,  
synthesis and use as sources of novel support materials in  
**chiral** sepn.)

IT Oligosaccharides, reactions

Polysaccharides, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(chloro-, hydroxy- and alkoxy silane derivs. of polysaccharides or

- oligosaccharides, polymerizable and **cross-linkable**, synthesis and use as sources of novel support materials in **chiral** sepn.)
- IT 119-53-9, Benzoin 487-26-3, Flavanone 1439-07-2, Trans-Stilbene oxide 3966-32-3, (R)-.alpha.-Methoxyphenyl acetic acid 5928-66-5, (R)-Benzoin 5928-67-6, (S)-Benzoin 7021-09-2, .alpha.-Methoxyphenyl acetic acid 13523-86-9, Pindolol 17002-31-2, (-)-Flavanone 25144-18-7, (+)-Trans-Stilbene oxide 26164-26-1, (S)-.alpha.-Methoxyphenyl acetic acid 26328-11-0, (S)-Pindolol 27439-12-9, (+)-Flavanone 40102-60-1, (-)-Trans-Stilbene oxide 68374-35-6, (R)-Pindolol  
 RL: ANT (Analyte); ANST (Analytical study)  
 (chloro-, hydroxy- and alkoxy silane derivs. of polysaccharides or oligosaccharides, polymerizable and **cross-linkable**, synthesis and use as sources of novel support materials in **chiral** sepn.)
- IT 98-59-9, 4-Methylbenzene sulfonyl chloride 112-43-6, 10-Undecen-1-ol 120-47-8, Ethyl 4-hydroxybenzoate 4420-74-0, 3-Mercaptopropyltrimethoxysilane 38460-95-6, 10-Undecenoyl chloride 54132-75-1, 3,5-Dimethylphenyl isocyanate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (chloro-, hydroxy- and alkoxy silane derivs. of polysaccharides or oligosaccharides, polymerizable and **cross-linkable**, synthesis and use as sources of novel support materials in **chiral** sepn.)
- IT 51148-67-5P 59100-95-7P, 4-(10-Undecenyl)benzoic acid 123598-41-4P, Ethyl 4-(10-undecenyl) benzoate 130747-08-9P, 4-(10-Undecenyl)benzoyl chloride  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (chloro-, hydroxy- and alkoxy silane derivs. of polysaccharides or oligosaccharides, polymerizable and **cross-linkable**, synthesis and use as sources of novel support materials in **chiral** sepn.)
- IT 602-09-5P, [1,1'-Binaphthalene]-2,2'-diol 65487-67-4P, 9-Anthracenemethanol, ..alpha..-(trifluoromethyl)-  
 RL: PUR (Purification or recovery); PREP (Preparation)  
 (enantiomeric sepn. of; chloro-, hydroxy- and alkoxy silane derivs. of polysaccharides or oligosaccharides, polymerizable and **cross-linkable**, synthesis and use as sources of novel support materials in **chiral** sepn.)
- IT 170211-41-3P, Cellulose, (3,5-dimethylphenyl)carbamate 10-undecenoate  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and functionalization of; chloro-, hydroxy- and alkoxy silane derivs. of polysaccharides or oligosaccharides, polymerizable and **cross-linkable**, synthesis and use as sources of novel support materials in **chiral** sepn.)
- IT 18531-94-7P, [1,1'-Binaphthalene]-2,2'-diol, (1R)- 18531-99-2P, [1,1'-Binaphthalene]-2,2'-diol, (1S)- 53531-34-3P, 9-Anthracenemethanol, .alpha..-(trifluoromethyl)-, (.alpha.R)- 60646-30-2P, 9-Anthracenemethanol, ..alpha..-(trifluoromethyl)-, (S)-  
 RL: PUR (Purification or recovery); PREP (Preparation)  
 (sepn. of, from racemic mixts.; chloro-, hydroxy- and alkoxy silane derivs. of polysaccharides or oligosaccharides, polymerizable and **cross-linkable**, synthesis and use as sources of novel support materials in **chiral** sepn.)

IT 998-30-1DP, Triethoxysilane, reaction products with silica and cellulose (dimethylphenyl)carbamate undecenoate 7585-39-9DP, .beta.-Cyclodextrin, derivs., reaction products with silica and functionalized silanes 7631-86-9DP, Silica, reaction products with functionalized silanes and cellulose (dimethylphenyl)carbamate undecenoate 9004-34-6DP, Cellulose, derivs., reaction products with silica and functionalized silanes 9004-54-0DP, Dextran, derivs., reaction products with silica and functionalized silanes 9005-80-5DP, Inulin, derivs., reaction products with silica and functionalized silanes 9012-76-4DP, Chitosan, derivs., reaction products with silica and functionalized silanes 9051-95-0DP, .alpha.-1,3-Glucan, derivs., reaction products with silica and functionalized silanes 9051-97-2DP, .beta.-D-Glucan, (1.fwdarw.3)-, derivs., reaction products with silica and functionalized silanes 9051-99-4DP, .beta.-1,2-Glucan, derivs., reaction products with silica and functionalized silanes 9052-06-6DP, .beta.-D-Mannan, (1.fwdarw.4)-, derivs., reaction products with silica and functionalized silanes 9057-02-7DP, Pullulan, derivs., reaction products with silica and functionalized silanes 9063-63-2DP, .beta.-D-Xylan, (1.fwdarw.4)-, derivs., reaction products with silica and functionalized silanes 10025-78-2DP, Trichlorosilane, reaction products with silica and cellulose (dimethylphenyl)carbamate undecenoate 54724-00-4DP, Curdlan, derivs., reaction products with silica and functionalized silanes 92880-82-5DP, .beta.-D-Fructan, (2.fwdarw.1)-, derivs., reaction products with silica and functionalized silanes 170211-41-3DP, Cellulose, (3,5-dimethylphenyl)carbamate 10-undecenoate, reaction products with silica and functionalized silanes

RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (supports; chloro-, hydroxy- and alkoxysilane derivs. of polysaccharides or oligosaccharides, polymerizable and cross-linkable, synthesis and use as sources of novel support materials in chiral sepn.)

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L1 95 SEA FILE=HCAPLUS ABB=ON PLU=ON DUVAL R?/AU  
 L2 15 SEA FILE=HCAPLUS ABB=ON PLU=ON LEVEQUE H?/AU  
 L3 102 SEA FILE=HCAPLUS ABB=ON PLU=ON (L1 OR L2)  
 L4 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L3 AND CHIRAL  
 L5 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 AND PATENT/DT  
 L10 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L4 NOT L5  
 L11 35 SEA FILE=REGISTRY ABB=ON PLU=ON (100-46-9/BI OR 103-67-3/BI  
 OR 19131-99-8/BI OR 354150-79-1/BI OR 3886-69-9/BI OR 5933-40-4  
 /BI OR 7585-39-9/BI OR 106-91-2/BI OR 1517-69-7/BI OR 5807-14-7  
 /BI OR 65452-14-4/BI OR 74-89-5/BI OR 75-04-7/BI OR 78196-35-7/  
 BI OR 98-86-2/BI OR 1100-22-7/BI OR 130463-96-6/BI OR 162008-12  
 -0/BI OR 199237-45-1/BI OR 201870-82-8/BI OR 259088-59-0/BI OR  
 259088-60-3/BI OR 2614-06-4/BI OR 352652-56-3/BI OR 352652-57-4  
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 74658-80-3/BI OR 74658-81-4/BI OR 77-36-1/BI OR 841-67-8/BI OR  
 97-90-5/BI OR 98-85-1/BI OR 99388-22-4/BI)

L12

5 SEA FILE=HCAPLUS ABB=ON PLU=ON L11 AND L10

5 citations of 35 yds  
displayed

=&gt; d ibib abs hitstr ind 1-5

**L12 ANSWER 1 OF 5 HCAPLUS** COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:379737 HCAPLUS  
 DOCUMENT NUMBER: 137:384607  
 TITLE: Enantiopure beads: a tool for asymmetric heterogeneous catalysis  
 AUTHOR(S): Herault, Damien; Saluzzo, Christine; Duval, Raphael; Lemaire, Marc  
 CORPORATE SOURCE: Laboratoire de Catalyse et Synthese Organique, CPE, UCBL, UMR 5622, Villeurbanne, 69622, Fr.  
 SOURCE: Journal of Molecular Catalysis A: Chemical (2002), 182-183, 249-256  
 CODEN: JMCCF2; ISSN: 1381-1169  
 PUBLISHER: Elsevier Science B.V.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB A copolymer contg. enantiopure epoxy groups was prepd. in excellent yield by radical suspension copolymerization of (S)-glycidyl methacrylate with ethylene glycol dimethacrylate. In order to control the phys. and surface properties of the copolymer, we studied the influence of the stirring rate reaction and the concn. of the crosslinking agent on the copolymerization reaction. This allowed the evaluation of the influence of the sp. surface area, the particle size and the level of functionalization on catalytic efficiency of their copolymer derivs. These enantiopure poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) beads were then transformed into optically active polyamino alcs. through epoxide ring opening with different achiral or homochiral amines. In order to show the efficiency of these new copolymers, they were used as ligands of ruthenium in asym. hydrogen transfer redn. of acetophenone.

IT 74-89-5, Methylamine, reactions 100-46-9, Benzylamine, reactions 103-67-3, N-Benzylmethylamine 3886-69-9, (R)-.alpha.-Methylbenzylamine 5807-14-7, 1,3,4,6,7,8-Hexahydro-2H-pyrimido[1,2-a]pyrimidine 5933-40-4 19131-99-8, (S)-N,.alpha.-Dimethylbenzylamine  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (for functionalization of chiral methacrylate copolymer; prepn. and functionalization and properties of enantiopure methacrylate copolymeric catalysts for hydrogen transfer redn. of acetophenone)  
 RN 74-89-5 HCAPLUS  
 CN Methanamine (9CI) (CA INDEX NAME)

H<sub>3</sub>C-NH<sub>2</sub>

RN 100-46-9 HCAPLUS  
 CN Benzenemethanamine (9CI). (CA INDEX NAME)

H<sub>2</sub>N-CH<sub>2</sub>-Ph

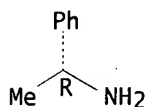
RN 103-67-3 HCAPLUS  
 CN Benzenemethanamine, N-methyl- (9CI) (CA INDEX NAME)

MeNH-CH<sub>2</sub>-Ph

RN 3886-69-9 HCAPLUS

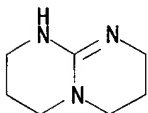
CN Benzenemethanamine, .alpha.-methyl-, (.alpha.R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 5807-14-7 HCAPLUS

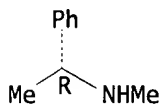
CN 2H-Pyrimido[1,2-a]pyrimidine, 1,3,4,6,7,8-hexahydro- (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 5933-40-4 HCAPLUS

CN Benzenemethanamine, N,.alpha.-dimethyl-, (.alpha.R)- (9CI) (CA INDEX NAME)

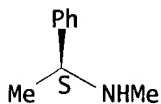
Absolute stereochemistry. Rotation (+).



RN 19131-99-8 HCAPLUS

CN Benzenemethanamine, N,.alpha.-dimethyl-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



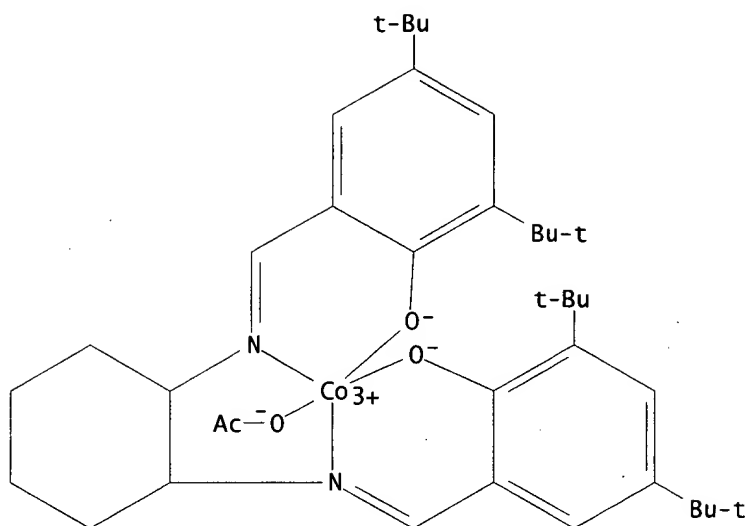
IT 201870-82-8

RL: CAT (Catalyst use); USES (Uses)

(for prepn. of **chiral** glycidyl methacrylate; prepn. and catalytic performance of enantiopure amine-functionalized methacrylate copolymeric catalysts for hydrogen transfer redn. of acetophenone)

RN 201870-82-8 HCAPLUS

CN Cobalt, (acetato-.kappa.O)[[2,2'-[(1R,2R)-1,2-cyclohexanediylbis[(nitrilo-.kappa.N)methylidyne]]bis[4,6-bis(1,1-dimethylethyl)phenolato-.kappa.O]](2-)]-, (SP-5-13)- (9CI) (CA INDEX NAME)



IT 52462-29-0

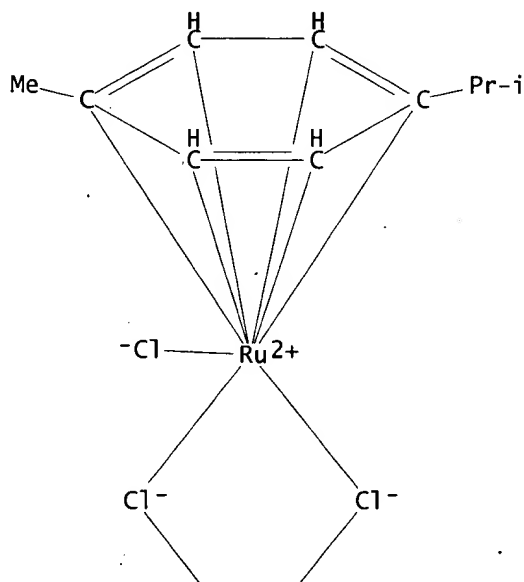
RL: CAT (Catalyst use); USES (Uses)

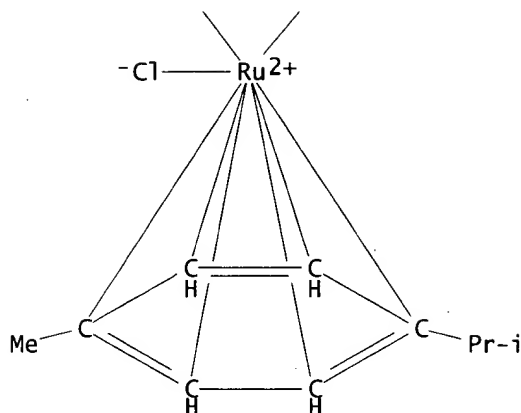
(hydrogen transfer redn. of acetophenone in presence of enantiopure  
amine-functionalized methacrylate copolymeric catalysts and ruthenium  
complex)

RN 52462-29-0 HCAPLUS

CN Ruthenium, di-.mu.-chlorodichlorobis[(1,2,3,4,5,6-.eta.)-1-methyl-4-(1-  
methylethyl)benzene]di- (9CI) (CA INDEX NAME)

PAGE 1-A





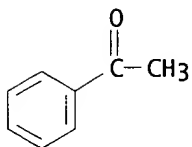
IT 98-86-2, Acetophenone, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(hydrogen transfer redn. of acetophenone in presence of enantiopure amine-functionalized methacrylate copolymeric catalysts and ruthenium complex)

RN 98-86-2 HCAPLUS

CN Ethanone, 1-phenyl- (9CI) (CA INDEX NAME)



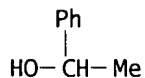
IT 98-85-1P 1517-69-7P

RL: SPN (Synthetic preparation); PREP (Preparation)

(hydrogen transfer redn. of acetophenone in presence of enantiopure amine-functionalized methacrylate copolymeric catalysts and ruthenium complex)

RN 98-85-1 HCAPLUS

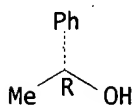
CN Benzenemethanol, .alpha.-methyl- (9CI) (CA INDEX NAME)



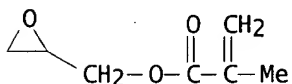
RN 1517-69-7 HCAPLUS

CN Benzenemethanol, .alpha.-methyl-, (.alpha.R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

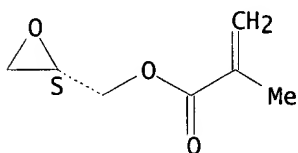


IT 106-91-2, Glycidyl methacrylate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. and catalytic performance of enantiopure amine-functionalized methacrylate copolymeric catalysts for hydrogen transfer redn. of acetophenone)  
 RN 106-91-2 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester (9CI) (CA INDEX NAME)



IT 78196-35-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and catalytic performance of enantiopure amine-functionalized methacrylate copolymeric catalysts for hydrogen transfer redn. of acetophenone)  
 RN 78196-35-7 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, (2S)-oxiranylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

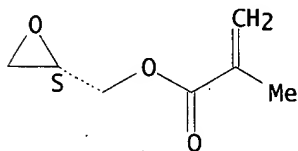


IT 354150-79-1P  
 RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (prepn. and functionalization of enantiopure methacrylate copolymeric catalysts for hydrogen transfer redn. of acetophenone)  
 RN 354150-79-1 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with (2S)-oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

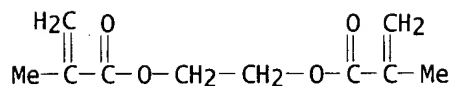
CRN 78196-35-7  
 CMF C7 H10 O3

Absolute stereochemistry.



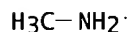
CM 2

CRN 97-90-5  
CMF C10 H14 O4

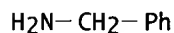


IT 74-89-5DP, Methylamine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 100-46-9DP, Benzylamine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 103-67-3DP, N-Benzylmethylamine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 3886-69-9DP, (R)-.alpha.-Methylbenzylamine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 5807-14-7DP, 1,3,4,6,7,8-Hexahydro-2H-pyrimido[1,2-a]pyrimidine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 5933-40-4DP, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 19131-99-8DP, (S)-N,.alpha.-Dimethylbenzylamine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 354150-79-IDP, amine-functionalized  
RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)  
(prepn. and properties of enantiopure methacrylate copolymeric catalysts for hydrogen transfer redn. of acetophenone)

RN 74-89-5 HCAPLUS  
CN Methanamine (9CI) (CA INDEX NAME)



RN 100-46-9 HCAPLUS  
CN Benzenemethanamine (9CI) (CA INDEX NAME)

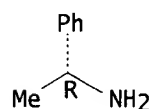


RN 103-67-3 HCAPLUS  
CN Benzenemethanamine, N-methyl- (9CI) (CA INDEX NAME)

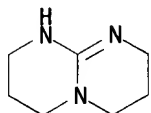


RN 3886-69-9 HCAPLUS  
CN Benzenemethanamine, .alpha.-methyl-, (.alpha.R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

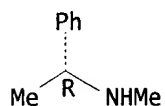


RN 5807-14-7 HCAPLUS  
 CN 2H-Pyrimido[1,2-a]pyrimidine, 1,3,4,6,7,8-hexahydro- (6CI, 8CI, 9CI) (CA INDEX NAME)



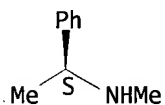
RN 5933-40-4 HCAPLUS  
 CN Benzenemethanamine, N,.alpha.-dimethyl-, (.alpha.R)- (9CI). (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 19131-99-8 HCAPLUS  
 CN Benzenemethanamine, N,.alpha.-dimethyl-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

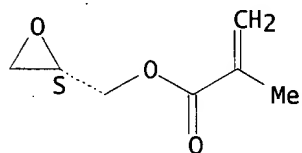


RN 354150-79-1 HCAPLUS  
 CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with (2S)-oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

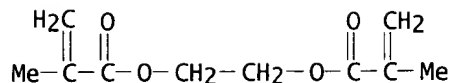
CRN 78196-35-7  
 CMF C7 H10 O3

Absolute stereochemistry.



CM 2

CRN 97-90-5  
 CMF C10 H14 O4



- CC 25-16 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
Section cross-reference(s): 22, 38, 67
- ST copolymeric enantiopure bead asym heterogeneous catalysis; **chiral**  
glycol dimethacrylate ethylene glycol dimethacrylate copolymer catalyst;  
hydrogen transfer redn acetophenone asym heterogeneous catalyst
- IT Particle size distribution  
(of enantiopure methacrylate copolymers as catalysts for hydrogen  
transfer redn. of acetophenone)
- IT Polymerization  
(radical; of **chiral** glycidyl methacrylate with ethylene  
glycol dimethacrylate with subsequent amine functionalization for  
prepn. of enantiopure copolymeric catalysts for hydrogen transfer redn.  
of acetophenone)
- IT Reduction catalysts  
(stereoselective; hydrogen transfer redn. of acetophenone in presence  
of enantiopure amine-functionalized methacrylate copolymeric catalysts  
and ruthenium complex)
- IT Reduction  
(stereoselective; of acetophenone in presence of enantiopure  
amine-functionalized methacrylate copolymeric catalysts and ruthenium  
complex)
- IT 74-89-5, Methylamine, reactions 100-46-9, Benzylamine,  
reactions 103-67-3, N-Benzylmethylamine 3886-69-9,  
(R)-.alpha.-Methylbenzylamine 5807-14-7, 1,3,4,6,7,8-Hexahydro-  
2H-pyrimido[1,2-a]pyrimidine 5933-40-4 19131-99-8,  
(S)-N,.alpha.-Dimethylbenzylamine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(for functionalization of **chiral** methacrylate copolymer;  
prepn. and functionalization and properties of enantiopure methacrylate  
copolymeric catalysts for hydrogen transfer redn. of acetophenone)
- IT 201870-82-8  
RL: CAT (Catalyst use); USES (Uses)  
(for prepn. of **chiral** glycidyl methacrylate; prepn. and  
catalytic performance of enantiopure amine-functionalized methacrylate  
copolymeric catalysts for hydrogen transfer redn. of acetophenone)
- IT 52462-29-0  
RL: CAT (Catalyst use); USES (Uses)  
(hydrogen transfer redn. of acetophenone in presence of enantiopure  
amine-functionalized methacrylate copolymeric catalysts and ruthenium  
complex)
- IT 98-86-2, Acetophenone, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrogen transfer redn. of acetophenone in presence of enantiopure  
amine-functionalized methacrylate copolymeric catalysts and ruthenium  
complex)
- IT 98-85-1P 1517-69-7P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(hydrogen transfer redn. of acetophenone in presence of enantiopure  
amine-functionalized methacrylate copolymeric catalysts and ruthenium  
complex)
- IT 106-91-2, Glycidyl methacrylate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. and catalytic performance of enantiopure amine-functionalized

methacrylate copolymeric catalysts for hydrogen transfer redn. of acetophenone)

IT 78196-35-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and catalytic performance of enantiopure amine-functionalized methacrylate copolymeric catalysts for hydrogen transfer redn. of acetophenone)

IT 354150-79-1P

RL: CAT (Catalyst use); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

(prepn. and functionalization of enantiopure methacrylate copolymeric catalysts for hydrogen transfer redn. of acetophenone)

IT

74-89-5DP, Methylamine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 100-46-9DP, Benzylamine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 103-67-3DP, N-Benzylmethylamine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 3886-69-9DP, (R)-.alpha.-Methylbenzylamine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 5807-14-7DP, 1,3,4,6,7,8-Hexahydro-2H-pyrimido[1,2-a]pyrimidine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 5933-40-4DP, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 19131-99-8DP, (S)-N,.alpha.-Dimethylbenzylamine, reaction products with (S)-glycidyl methacrylate-ethylene glycol dimethacrylate copolymer 354150-79-1DP, amine-functionalized

RL: CAT (Catalyst use); PRP (Properties); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(prepn. and properties of enantiopure methacrylate copolymeric catalysts for hydrogen transfer redn. of acetophenone)

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:430284 HCAPLUS

DOCUMENT NUMBER: 135:157787

TITLE: Enantioseparation of aminoglutethimide and thalidomide by high performance liquid chromatography or supercritical fluid chromatography on mono-2 and mono-6-O-pentenyl-.beta.-cyclodextrin-based chiral stationary phases

AUTHOR(S): Duval, Raphael; Leveque, Hubert; Prigent, Yann; Aboul-Enein, Hassan Y.

CORPORATE SOURCE: ChiralSep S.A., La Frenaye, 76170, Fr.

SOURCE: Biomedical Chromatography (2001), 15(3), 202-206

CODEN: BICHE2; ISSN: 0269-3879

PUBLISHER: John Wiley & Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Mono-2 and mono-6-O-pentenyl-.beta.-cyclodextrin (mono-2-pent-.beta.-CD and mono-6-pent-.beta.-CD), covalently linked to mercaptopropylsilica gel (thiol-Si) through thioether or sulfone linkage, reveal differentiated enantioselectivities in the sepn. of piperidine-2,6-dione-related drugs, namely aminoglutethimide and thalidomide, in supercrit. fluid conditions. Supercrit. fluid chromatog. resoln. on completely defined mono-cyclodextrin deriv.-based chiral stationary phases (CSP) is a method of choice for the sepn. of aminoglutethimide but not effective for thalidomide. For both high performance liq. chromatog. (HPLC) and

supercrit. fluid chromatog. (SFC) conditions, the impact of the position, imposed to be 2 or 6 in our synthetic pathway, of the pentenyl moiety on one of the glucopyranosidics of the CD cage is of crucial importance in the **chiral** discrimination phenomenon. Addnl., the nature of the heteroatom present in the spacer arm between the CD and the silica gel, in this case thioether or sulfone functionality, is also essential for the **chiral** recognition mechanism(s) for the solute enantiomer.

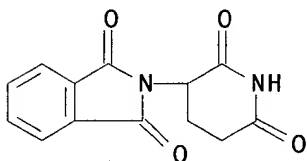
IT 50-35-1 841-67-8 2614-06-4 352652-56-3  
352652-57-4 352652-58-5

RL: ANT (Analyte); ANST (Analytical study)

(enantiosepn. of aminogluthimide and thalidomide by HPLC or supercrit. fluid chromatog. on mono-substituted .beta.-cyclodextrin-based **chiral** stationary phases)

RN 50-35-1 HCAPLUS

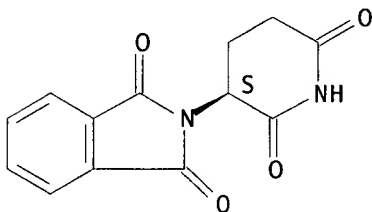
CN 1H-Isoindole-1,3(2H)-dione, 2-(2,6-dioxo-3-piperidiny)- (9CI) (CA INDEX NAME)



RN 841-67-8 HCAPLUS

CN 1H-Isoindole-1,3(2H)-dione, 2-[(3S)-2,6-dioxo-3-piperidiny]- (9CI) (CA INDEX NAME)

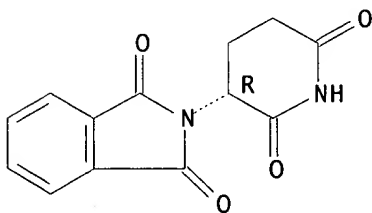
Absolute stereochemistry. Rotation (-).



RN 2614-06-4 HCAPLUS

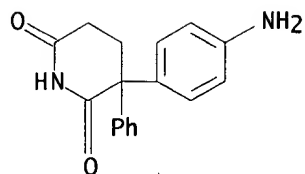
CN 1H-Isoindole-1,3(2H)-dione, 2-[(3R)-2,6-dioxo-3-piperidiny]- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



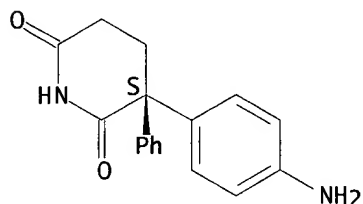
RN 352652-56-3 HCAPLUS

CN 2,6-Piperidinedione, 3-(4-aminophenyl)-3-phenyl- (9CI) (CA INDEX NAME)



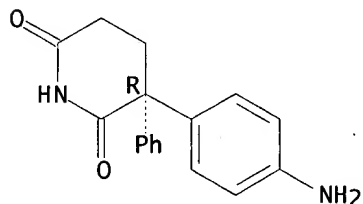
RN 352652-57-4 HCAPLUS  
CN 2,6-Piperidinedione, 3-(4-aminophenyl)-3-phenyl-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



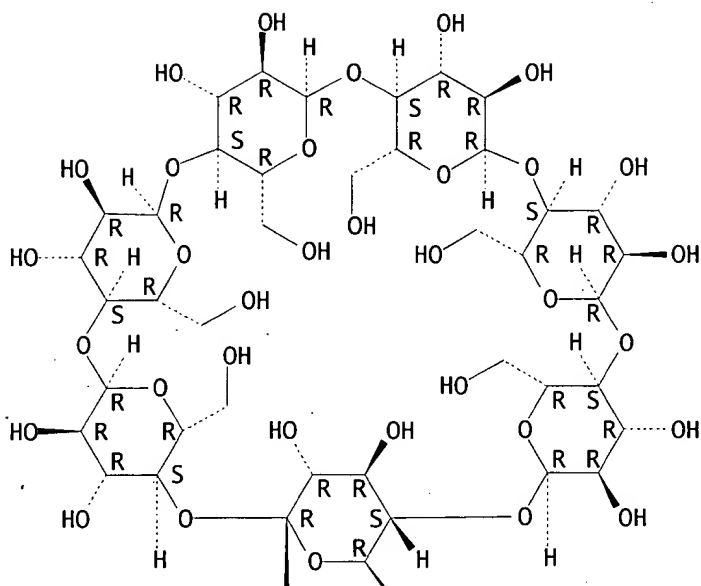
RN 352652-58-5 HCAPLUS  
CN 2,6-Piperidinedione, 3-(4-aminophenyl)-3-phenyl-, (3R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 7585-39-9D, .beta.-Cyclodextrin, derivs.  
RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
(enantiosepn. of aminoglutethimide and thalidomide by HPLC or  
supercrit. fluid chromatog. on mono-substituted .beta.-cyclodextrin-  
based chiral stationary phases)  
RN 7585-39-9 HCAPLUS  
CN .beta.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



CC 64-3 (Pharmaceutical Analysis)  
 ST aminoglutethimide thalidomide resoln supercrit fluid chromatog; HPLC sepn  
 aminoglutethimide thalidomide  
 IT HPLC  
 HPLC stationary phases  
 Supercritical fluid chromatography  
 (enantiosepn. of aminoglutethimide and thalidomide by HPLC or  
 supercrit. fluid chromatog. on mono-substituted .beta.-cyclodextrin-  
 based **chiral** stationary phases)  
 IT 50-35-1 841-67-8 2614-06-4 352652-56-3  
 352652-57-4 352652-58-5  
 RL: ANT (Analyte); ANST (Analytical study)  
 (enantiosepn. of aminoglutethimide and thalidomide by HPLC or  
 supercrit. fluid chromatog. on mono-substituted .beta.-cyclodextrin-  
 based **chiral** stationary phases)  
 IT 7585-39-9D, .beta.-Cyclodextrin, derivs.  
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
 (enantiosepn. of aminoglutethimide and thalidomide by HPLC or  
 supercrit. fluid chromatog. on mono-substituted .beta.-cyclodextrin-  
 based **chiral** stationary phases)  
 REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2001:372587 HCAPLUS

DOCUMENT NUMBER: 135:166677  
 TITLE: Enantiopure poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate): a new material for supported catalytic asymmetric hydrogen transfer reduction  
 AUTHOR(S): Rolland, A.; Herault, D.; Touchard, F.; Saluzzo, C.; Duval, R.; Lemaire, M.  
 CORPORATE SOURCE: UMR 5622, UCBL, CPE, Laboratoire de Catalyse et Synthese Organique, Villeurbanne, 69622, Fr.  
 SOURCE: Tetrahedron: Asymmetry (2001), 12(5), 811-815  
 CODEN: TASYE3; ISSN: 0957-4166  
 PUBLISHER: Elsevier Science Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 135:166677

AB A novel copolymer contg. **chiral** epoxy residues was prepd. Free radical initiated suspension copolymn. of (R)- or (S)-glycidyl methacrylate with ethylene glycol dimethacrylate afforded crosslinked copolymer in high yield. Optically active polymers contg. amino alc. functionalities were then formed from this copolymer through epoxide ring opening with a no. of achiral and homochiral amines. It was shown that ruthenium complexes based on these new polymeric amino alc. ligands were effective catalysts for the asym. hydrogen transfer redn. of acetophenone.

IT 130463-96-6P

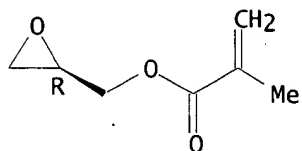
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP (Preparation)

(enantiopure poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) for supported catalytic asym. hydrogen transfer redn.)

RN 130463-96-6 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (2R)-oxiranylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



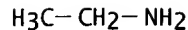
IT 75-04-7DP, Ethylamine, reaction products with poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) 100-46-9DP, Benzenemethanamine, reaction products with poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) 103-67-3DP, N-Methylbenzylamine, reaction products with poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) 3886-69-9DP, (R)-1-Phenylethylamine, reaction products with poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) 5933-40-4DP, (R)-N-Methyl-1-phenylethylamine, reaction products with poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) 19131-99-8DP, (S)-N-Methyl-1-phenylethylamine, reaction products with poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) 354150-79-1DP, reaction products with amines

RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

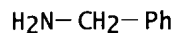
(enantiopure poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) for supported catalytic asym. hydrogen transfer redn.)

RN 75-04-7 HCAPLUS

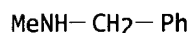
CN Ethanamine (9CI) (CA INDEX NAME)



RN 100-46-9 HCAPLUS  
CN Benzenemethanamine (9CI) (CA INDEX NAME)

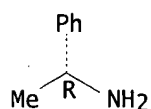


RN 103-67-3 HCAPLUS  
CN Benzenemethanamine, N-methyl- (9CI) (CA INDEX NAME)



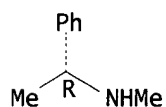
RN 3886-69-9 HCAPLUS  
CN Benzenemethanamine, .alpha.-methyl-, (.alpha.R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



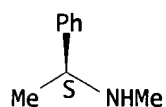
RN 5933-40-4 HCAPLUS  
CN Benzenemethanamine, N,.alpha.-dimethyl-, (.alpha.R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 19131-99-8 HCAPLUS  
CN Benzenemethanamine, N,.alpha.-dimethyl-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).

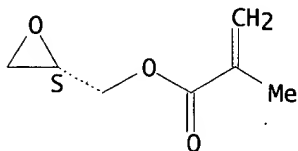


RN 354150-79-1 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with (2S)-oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

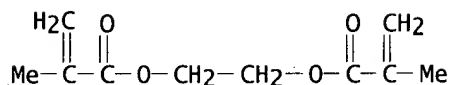
CRN 78196-35-7  
CMF C7 H10 O3

Absolute stereochemistry.

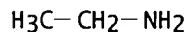


CM 2

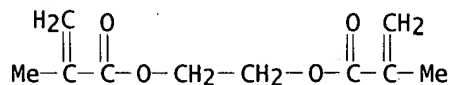
CRN 97-90-5  
CMF C10 H14 O4



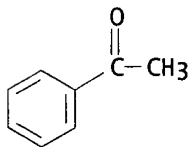
IT 75-04-7, Ethylamine, reactions 97-90-5, Ethylene glycol dimethacrylate 98-86-2, Acetophenone, reactions 100-46-9, Benzylamine, reactions 103-67-3, N-Methylbenzylamine 106-91-2, Glycidyl methacrylate 3886-69-9, (R)-1-Phenylethylamine 5933-40-4, (R)-N-Methyl-1-phenylethylamine 19131-99-8, (S)-N-Methyl-1-phenylethylamine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(enantiopure poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) for supported catalytic asym. hydrogen transfer redn.)  
RN 75-04-7 HCAPLUS  
CN Ethanamine (9CI) (CA INDEX NAME)



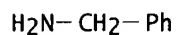
RN 97-90-5 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester (9CI) (CA INDEX NAME)



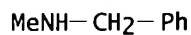
RN 98-86-2 HCAPLUS  
CN Ethanone, 1-phenyl- (9CI) (CA INDEX NAME)



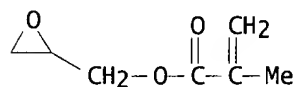
RN 100-46-9 HCAPLUS  
CN Benzenemethanamine (9CI) (CA INDEX NAME)



RN 103-67-3 HCAPLUS  
CN Benzenemethanamine, N-methyl- (9CI) (CA INDEX NAME)

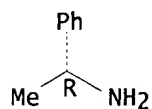


RN 106-91-2 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, oxiranylmethyl ester (9CI) (CA INDEX NAME)



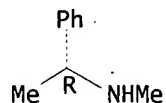
RN 3886-69-9 HCAPLUS  
CN Benzenemethanamine, .alpha.-methyl-, (.alpha.R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



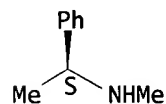
RN 5933-40-4 HCAPLUS  
CN Benzenemethanamine, N,.alpha.-dimethyl-, (.alpha.R)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).



RN 19131-99-8 HCAPLUS  
CN Benzenemethanamine, N,.alpha.-dimethyl-, (.alpha.S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



IT 78196-35-7P 354150-79-1P

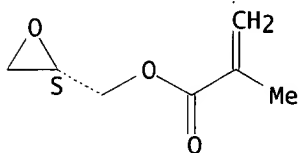
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(enantiopure poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) for supported catalytic asym. hydrogen transfer redn.)

RN 78196-35-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, (2S)-oxiranylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 354150-79-1 HCAPLUS

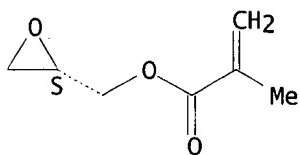
CN 2-Propenoic acid, 2-methyl-, 1,2-ethanediyl ester, polymer with (2S)-oxiranylmethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 78196-35-7

CMF C7 H10 O3

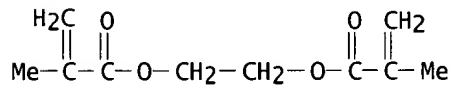
Absolute stereochemistry.



CM 2

CRN 97-90-5

CMF C10 H14 O4



IT 1517-69-7P, (R)-1-Phenylethanol

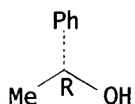
RL: SPN (Synthetic preparation); PREP (Preparation)

(enantiopure poly(glycidyl methacrylate-co-ethylene glycol dimethacrylate) for supported catalytic asym. hydrogen transfer redn.)

RN 1517-69-7 HCAPLUS

CN Benzenemethanol, .alpha.-methyl-, (.alpha.R)- (9CI) (CA INDEX NAME)

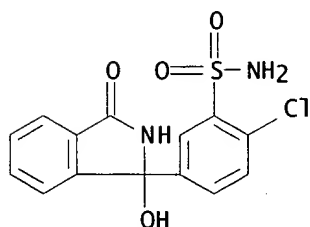
Absolute stereochemistry. Rotation (+).



- CC 25-7 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)  
Section cross-reference(s): 35
- ST glycidyl methacrylate dimethacrylate copolymer prepn catalyst  
stereoselective redn acetophenone
- IT Polymer-supported reagents  
(enantiopure poly(glycidyl methacrylate-co-ethylene glycol  
dimethacrylate) for supported catalytic asym. hydrogen transfer redn.)
- IT Hydrogenation  
Hydrogenation catalysts  
(stereoselective; enantiopure poly(glycidyl methacrylate-co-ethylene  
glycol dimethacrylate) for supported catalytic asym. hydrogen transfer  
redn.)
- IT **130463-96-6P**  
RL: BPN (Biosynthetic preparation); BIOL (Biological study); PREP  
(Preparation)  
(enantiopure poly(glycidyl methacrylate-co-ethylene glycol  
dimethacrylate) for supported catalytic asym. hydrogen transfer redn.)
- IT **75-04-7DP**, Ethylamine, reaction products with poly(glycidyl  
methacrylate-co-ethylene glycol dimethacrylate) **100-46-9DP**,  
Benzenemethanamine, reaction products with poly(glycidyl  
methacrylate-co-ethylene glycol dimethacrylate) **103-67-3DP**,  
N-Methylbenzylamine, reaction products with poly(glycidyl  
methacrylate-co-ethylene glycol dimethacrylate) **3886-69-9DP**,  
(R)-1-Phenylethylamine, reaction products with poly(glycidyl  
methacrylate-co-ethylene glycol dimethacrylate) **5933-40-4DP**,  
(R)-N-Methyl-1-phenylethylamine, reaction products with poly(glycidyl  
methacrylate-co-ethylene glycol dimethacrylate) **19131-99-8DP**,  
(S)-N-Methyl-1-phenylethylamine, reaction products with poly(glycidyl  
methacrylate-co-ethylene glycol dimethacrylate) **354150-79-1DP**,  
reaction products with amines  
RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);  
USES (Uses)  
(enantiopure poly(glycidyl methacrylate-co-ethylene glycol  
dimethacrylate) for supported catalytic asym. hydrogen transfer redn.)
- IT **75-04-7**, Ethylamine, reactions **97-90-5**, Ethylene glycol  
dimethacrylate **98-86-2**, Acetophenone, reactions **100-46-9**  
, Benzylamine, reactions **103-67-3**, N-Methylbenzylamine  
**106-91-2**, Glycidyl methacrylate **3886-69-9**,  
(R)-1-Phenylethylamine **5933-40-4**, (R)-N-Methyl-1-  
phenylethylamine **19131-99-8**, (S)-N-Methyl-1-phenylethylamine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(enantiopure poly(glycidyl methacrylate-co-ethylene glycol  
dimethacrylate) for supported catalytic asym. hydrogen transfer redn.)
- IT **78196-35-7P 354150-79-1P**  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(enantiopure poly(glycidyl methacrylate-co-ethylene glycol  
dimethacrylate) for supported catalytic asym. hydrogen transfer redn.)
- IT **1517-69-7P**, (R)-1-Phenylethanol  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(enantiopure poly(glycidyl methacrylate-co-ethylene glycol  
dimethacrylate) for supported catalytic asym. hydrogen transfer redn.)
- REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS

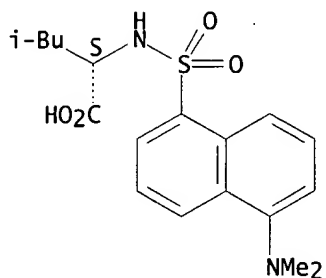
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2000:56569 HCAPLUS  
 DOCUMENT NUMBER: 132:175112  
 TITLE: Pure monopentenylated .beta.-cyclodextrin as  
 chiral agent: purity check by LC-ELSD and  
 LC-MS  
 AUTHOR(S): Caron, I.; Elfakir, C.; Dreux, M.; Leveque, H.  
 ; Duval, R.  
 CORPORATE SOURCE: Institut de Chimie Organique et Analytique (ICOA),  
 CNRS UPRES-A 6005, Universite d'Orleans, Orleans,  
 45067, Fr.  
 SOURCE: Proceedings of the International Symposium on  
 Cyclodextrins, 9th, Santiago de Comostela, Spain, May  
 31-June 3, 1998 (1999), Meeting Date 1998, 617-620.  
 Editor(s): Labandeira, J. J. Torres; Vila-Jato, J. L.  
 Kluwer Academic Publishers: Dordrecht, Neth.  
 CODEN: 68NHAE  
 DOCUMENT TYPE: Conference  
 LANGUAGE: English  
 AB Liq. chromatog. (LC) with evaporative light scattering detection (ELSD)  
 and LC-mass spectrometry (MS) were used to analyze monopentenylated  
 .beta.-cyclodextrins (.beta.-CD) without further derivations. Spherisorb  
 ODS and polymeric Astec NH2 columns were used with acetonitrile/water  
 mixts. as the mobile phases. The LC-ELSD system is suitable for  
 performing a simple and fast control of mono-2-O-pent-4-enyl-.beta.-CD  
 synthesis without further derivations to ensure quality in these products.  
 For chiral sepn., the use of well characterized pentenylated  
 .beta.-CD derivs., by LC-ELSD and LC-MS, is recommended to achieve better  
 batch to batch reproducibility of chiral stationary phase and in  
 order to evaluate sepn. mechanisms.  
 IT 77-36-1, (.+-.)-Chlorthalidone 1100-22-7,  
 Dansyl-L-leucine 65452-14-4, Dansyl-DL-leucine  
 74658-80-3, (-)-Chlorthalidone 74658-81-4,  
 (+)-Chlorthalidone 99388-22-4, Dansyl-D-leucine  
 RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST  
 (Analytical study); PROC (Process)  
 (LC-ELSD and LC-MS in anal. of purity of monopentenylated  
 .beta.-cyclodextrin for chiral stationary phase in  
 enantiomeric resoln. of)  
 RN 77-36-1 HCAPLUS  
 CN Benzenesulfonamide, 2-chloro-5-(2,3-dihydro-1-hydroxy-3-oxo-1H-isoindol-1-  
 yl)- (9CI) (CA INDEX NAME)



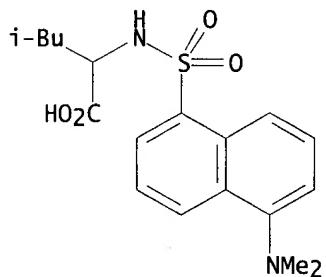
RN 1100-22-7 HCAPLUS  
 CN L-Leucine, N-[[5-(dimethylamino)-1-naphthalenyl]sulfonyl]- (9CI) (CA  
 INDEX NAME)

Absolute stereochemistry.



RN 65452-14-4 HCAPLUS

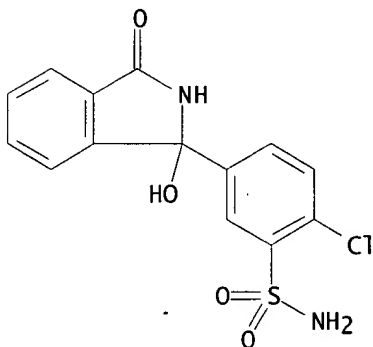
CN Leucine, N-[[5-(dimethylamino)-1-naphthalenyl]sulfonyl]- (9CI) (CA INDEX NAME)



RN 74658-80-3 HCAPLUS

CN Benzenesulfonamide, 2-chloro-5-(2,3-dihydro-1-hydroxy-3-oxo-1H-isoindol-1-yl)-, (-)- (9CI) (CA INDEX NAME)

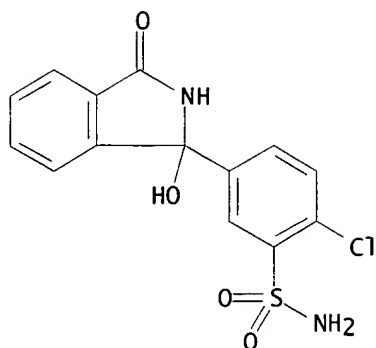
Rotation (-).



RN 74658-81-4 HCAPLUS

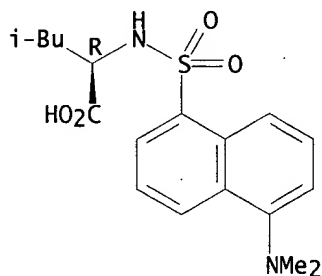
CN Benzenesulfonamide, 2-chloro-5-(2,3-dihydro-1-hydroxy-3-oxo-1H-isoindol-1-yl)-, (+)- (9CI) (CA INDEX NAME)

Rotation (+).



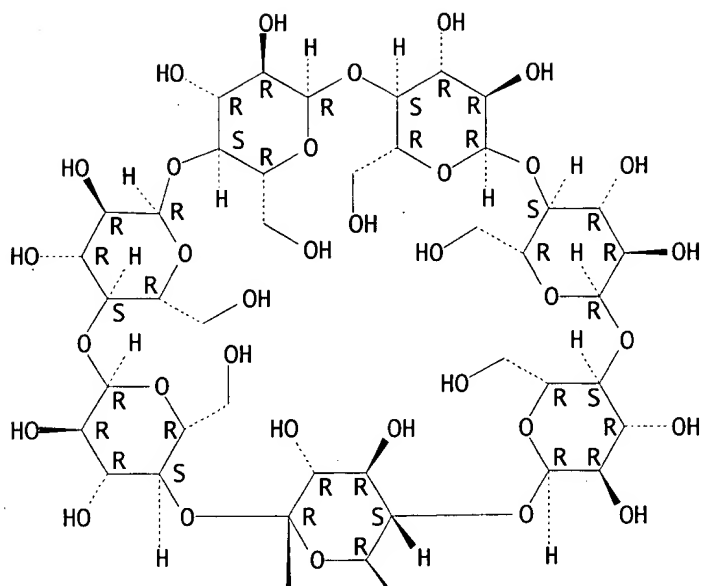
RN 99388-22-4 HCAPLUS  
 CN D-Leucine, N-[[5-(dimethylamino)-1-naphthalenyl]sulfonyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 7585-39-9, .beta.-Cyclodextrin 7585-39-9D,  
 .beta.-Cyclodextrin, pentenylated derivs. 259088-60-3,  
 Mono-3-O-pent-4-enyl-.beta.-cyclodextrin  
 RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST  
 (Analytical study); PROC (Process)  
 (liq. chromatog./ELSD and LC-MS in anal. of pentenylated  
 .beta.-cyclodextrin mixts.)  
 RN 7585-39-9 HCAPLUS  
 CN .beta.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

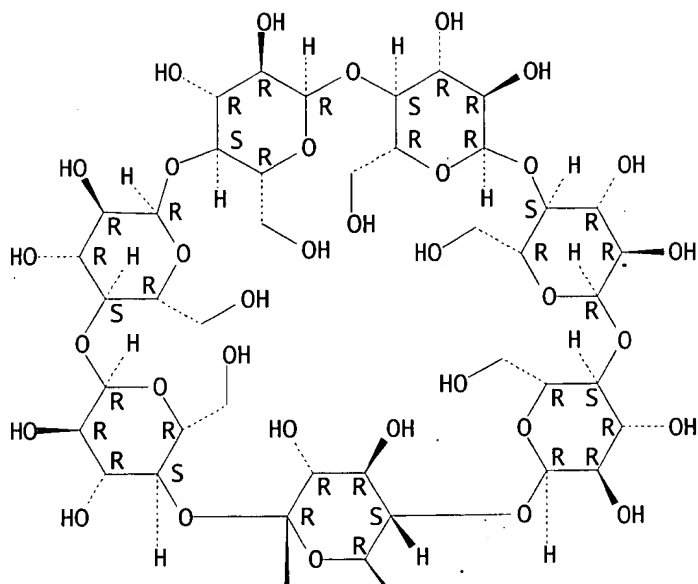
Absolute stereochemistry.



RN 7585-39-9 HCAPLUS  
CN .beta.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



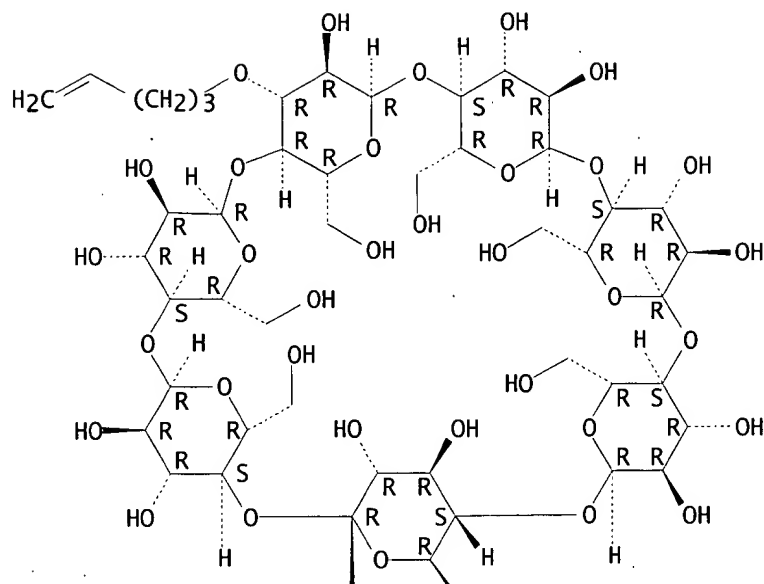
PAGE 2-A



RN 259088-60-3 HCAPLUS

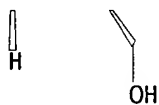
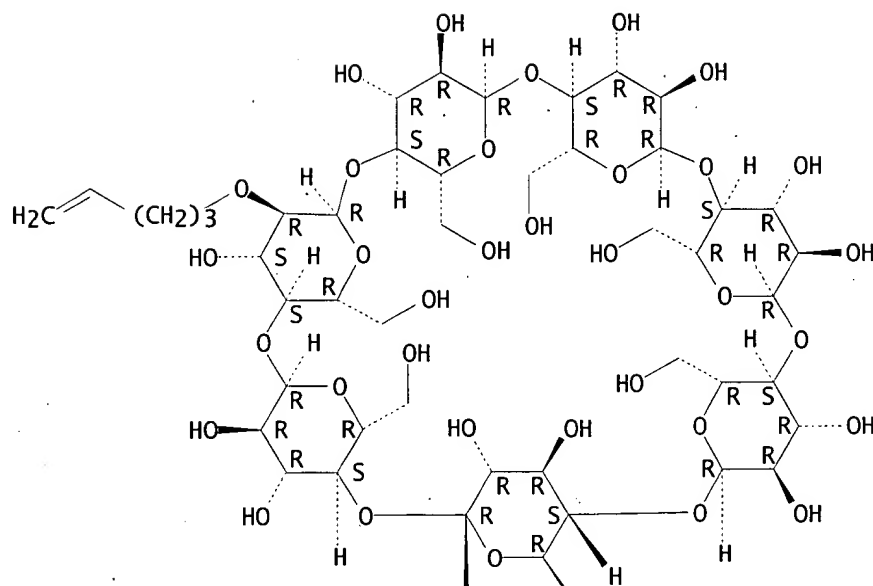
CN .beta.-Cyclodextrin, 3A-0-4-pentenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 162008-12-0, Mono-2-O-pent-4-enyl-.beta.-cyclodextrin  
 259088-59-0, Mono-6-O-pent-4-enyl-.beta.-cyclodextrin  
 RL: AMX (Analytical matrix); ANT (Analyte); NUU (Other use, unclassified);  
 ANST (Analytical study); USES (Uses)  
 (pure monopenentenylated .beta.-cyclodextrin as **chiral** agent:  
 purity check by LC-ELSD and LC-MS)  
 RN 162008-12-0 HCAPLUS  
 CN .beta.-Cyclodextrin, 2A-O-4-pentenyl- (9CI) (CA INDEX NAME)

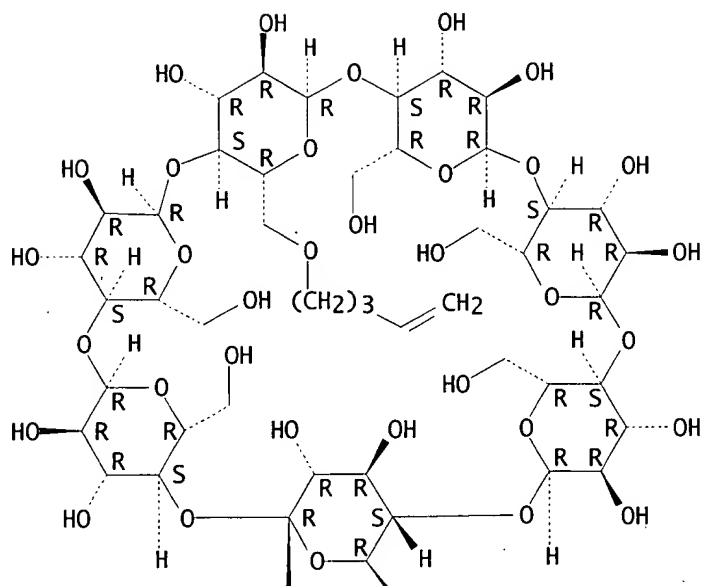
Absolute stereochemistry.



RN 259088-59-0 HCAPLUS

CN .beta.-Cyclodextrin, 6A-O-4-pentenyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



- CC 80-4 (Organic Analytical Chemistry)  
Section cross-reference(s): 33
- ST monopentenylated cyclodextrin purity analysis liq chromatog ELSD MS;  
**chiral** agent monopentenylated cyclodextrin purity analysis LC ELSD  
MS; evaporative light scattering detection LC monopentenylated  
cyclodextrin purity analysis; mass spectrometry LC monopentenylated  
cyclodextrin purity analysis
- IT Resolution (separation)  
(chromatog.; LC-ELSD and LC-MS in anal. of purity of monopentenylated  
.beta.-cyclodextrin for **chiral** stationary phase in  
enantiomeric resoln.)
- IT Mass spectrometry  
Mass spectrometry  
(liq. chromatog. combined with; pure monopentenylated  
.beta.-cyclodextrin as **chiral** agent: purity check by LC-ELSD  
and LC-MS)
- IT Liquid chromatography  
Liquid chromatography  
(mass spectrometry combined with; pure monopentenylated  
.beta.-cyclodextrin as **chiral** agent: purity check by LC-ELSD  
and LC-MS)
- IT Liquid chromatography  
(pure monopentenylated .beta.-cyclodextrin as **chiral** agent:  
purity check by LC-ELSD and LC-MS)
- IT 77-36-1, (+-)-Chlorthalidone 1100-22-7,

Dansyl-L-leucine **65452-14-4**, Dansyl-DL-leucine  
**74658-80-3**, (-)-Chlorthalidone **74658-81-4**,  
 (+)-Chlorthalidone **99388-22-4**, Dansyl-D-leucine  
 RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST  
 (Analytical study); PROC (Process)  
 (LC-ELSD and LC-MS in anal. of purity of monopentenylated  
 .beta.-cyclodextrin for **chiral** stationary phase in  
 enantiomeric resoln. of)

IT **7585-39-9**, .beta.-Cyclodextrin **7585-39-9D**,  
 .beta.-Cyclodextrin, pentenylated derivs. **259088-60-3**,  
 Mono-3-O-pent-4-enyl-.beta.-cyclodextrin  
 RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST  
 (Analytical study); PROC (Process)  
 (liq. chromatog./ELSD and LC-MS in anal. of pentenylated  
 .beta.-cyclodextrin mixts.)  
 IT **162008-12-0**, Mono-2-O-pent-4-enyl-.beta.-cyclodextrin  
**259088-59-0**, Mono-6-O-pent-4-enyl-.beta.-cyclodextrin  
 RL: AMX (Analytical matrix); ANT (Analyte); NUU (Other use, unclassified);  
 ANST (Analytical study); USES (Uses)  
 (pure monopentenylated .beta.-cyclodextrin as **chiral** agent:  
 purity check by LC-ELSD and LC-MS)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:697800 HCAPLUS

DOCUMENT NUMBER: 128:26726

TITLE: Synthesis and evaluation in HPLC of a new  
**chiral** stationary phase based on a purified  
 .beta.-cyclodextrin : .beta.-Kleptodex-2-OH

AUTHOR(S): Duval, Raphael

CORPORATE SOURCE: Ste Chiral Sep, La Frenaye, 76170, Fr.

SOURCE: Rivista Italiana EPPPOS (1997), (Spec. Num., 15th  
 Journees Internationales Huiles Essentielles, 1996),  
 785-790

CODEN: RIEPD7; ISSN: 0392-0445

PUBLISHER: Rivista Italiana EPPPOS

DOCUMENT TYPE: Journal

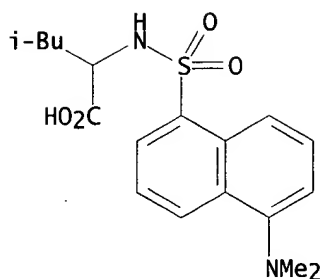
LANGUAGE: French

AB Synthesis and valuation in HPLC of a new **chiral** stationary phase  
 (CSP) is based on a pure monoderivative of .beta.-cyclodextrin which has  
 been regioselectively linked at the 2-position of the glucosidic moiety.  
 Influences of the length of the spacer arm and of the chem. treatment of  
 the support on the selectivity factor have been demonstrated.

IT **65452-14-4**, Dansyl DL-leucine  
 RL: PEP (Physical, engineering or chemical process); PROC (Process)  
 (resoln. of; synthesis and evaluation in HPLC of a new **chiral**  
 stationary phase based on a purified .beta.-cyclodextrin :  
 .beta.-Kleptodex-2-OH)

RN 65452-14-4 HCAPLUS

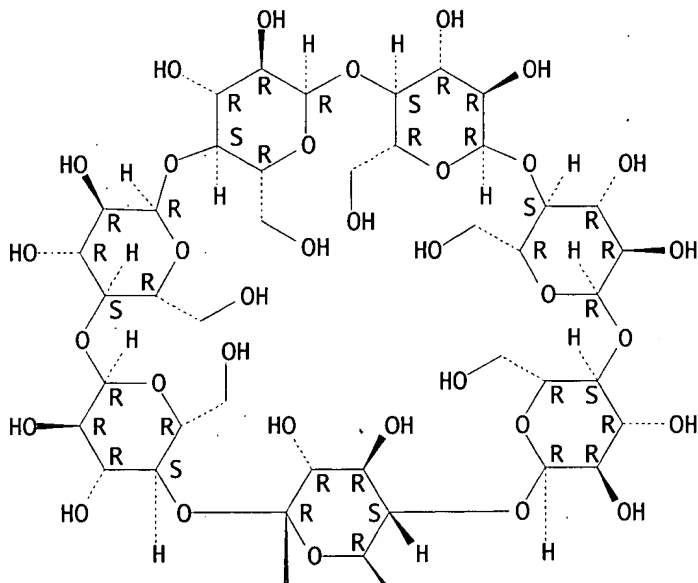
CN Leucine, N-[[5-(dimethylamino)-1-naphthalenyl]sulfonyl]- (9CI) (CA INDEX  
 NAME)



IT 7585-39-9DP, .beta.-Cyclodextrin, hydroxy derivs.  
 199237-45-1P, .beta.-Kleptodex-2-OH  
 RL: ARU (Analytical role, unclassified); PNU (Preparation, unclassified);  
 ANST (Analytical study); PREP (Preparation)  
 (synthesis and evaluation in HPLC of a new **chiral** stationary  
 phase based on a purified .beta.-cyclodextrin : .beta.-Kleptodex-2-OH)  
 RN 7585-39-9 HCAPLUS  
 CN .beta.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A



PAGE 2-A



RN 199237-45-1 HCAPLUS  
 CN .beta.-Kleptodex-2-OH (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

- CC 62-1 (Essential Oils and Cosmetics)  
Section cross-reference(s): 9, 63
- ST beta cyclodextrin Kleptodex **chiral** stationary phase; chromatog  
stationary phase **chiral** beta cyclodextrin
- IT HPLC stationary phases  
(**chiral**; synthesis and evaluation in HPLC of a new  
**chiral** stationary phase based on a purified .beta.-cyclodextrin  
: .beta.-Kleptodex-2-OH)
- IT Resolution (separation)  
(synthesis and evaluation in HPLC of a new **chiral** stationary  
phase based on a purified .beta.-cyclodextrin : .beta.-Kleptodex-2-OH)
- IT 65452-14-4, Dansyl DL-leucine  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(resoln. of; synthesis and evaluation in HPLC of a new **chiral**  
stationary phase based on a purified .beta.-cyclodextrin :  
.beta.-Kleptodex-2-OH)
- IT 7585-39-9DP, .beta.-Cyclodextrin, hydroxy derivs.  
199237-45-1P, .beta.-Kleptodex-2-OH  
RL: ARU (Analytical role, unclassified); PNU (Preparation, unclassified);  
ANST (Analytical study); PREP (Preparation)  
(synthesis and evaluation in HPLC of a new **chiral** stationary  
phase based on a purified .beta.-cyclodextrin : .beta.-Kleptodex-2-OH)

⇒ file reg

FILE 'REGISTRY' ENTERED AT 13:57:52 ON 16 MAY 2003  
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
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⇒ d que stat 112

this is the STR search for the following  
 queries in HCAPLUS

L1 SCR 2004 AND 1707 AND 1838

L2 SCR 970

L3 STR parent STR

CH2=CH~Ak~O~Cb  
 46 7 8 9 10

unsat

## NODE ATTRIBUTES:

CONNECT IS E2 RC AT 8

CONNECT IS E2 RC AT 10

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 10

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M2 C AT 8

ECOUNT IS E6 C AT 10

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 5

## STEREO ATTRIBUTES: NONE

L4 2405 SEA FILE=REGISTRY SSS FUL L3 AND L1 AND L2 2405 cp da

L9 STR subset STR-added the limitations for Q

CH2=CH~Ak~O~Cb~G3  
 46 7 8 9 10 15

Cb @3

N=C=O

O @25

@16 17 18

O=C~N~N~N  
 19 @20 21 47 48

O=C~G4  
 22 @23 24

N=C=S  
 @28 27 26

CH2~G1  
 @29 30

37  
 O  
 O~S~G5  
 @31 32 33

02 methyl

VAR G1=X/31

VAR G3=16/20/23/28/NH2/29

VAR G4=X/25

VAR G5=3/ME

## NODE ATTRIBUTES:

CONNECT IS E2 RC AT 8

CONNECT IS E2 RC AT 10

CONNECT IS E2 RC AT 17

CONNECT IS E1 RC AT 25

CONNECT IS E2 RC AT 27

CONNECT IS E1 RC AT 37

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 3

GGCAT IS UNS AT 10

DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M6 C AT 3  
 ECOUNT IS M2 C AT 8  
 ECOUNT IS E6 C AT 10

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 28

STEREO ATTRIBUTES: NONE

L11 49 SEA FILE=REGISTRY SUB=L4 SSS FUL L9

~~L12 47 SEA FILE=REGISTRY ABB=ON PLU=ON L11/COM~~

gets rid of cpds coming from incomplete iterations (junk)  
 47 cpds

=> file hcaplus

FILE "HCAPLUS" ENTERED AT 13:57:53 ON 16 MAY 2003

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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these 47 cpds are the basis for the following queries

FILE COVERS 1907 - 16 May 2003 VOL 138 ISS 21

FILE LAST UPDATED: 15 May 2003 (20030515/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que nos 151

no str displayed

L1 SCR 2004 AND 1707 AND 1838

L2 SCR 970

L3 STR

L4 2405 SEA FILE=REGISTRY SSS FUL L3 AND L1 AND L2

L9 STR

L11 49 SEA FILE=REGISTRY SUB=L4 SSS FUL L9

L12 47 SEA FILE=REGISTRY ABB=ON PLU=ON L11/COM

L39 123 SEA FILE=HCAPLUS ABB=ON PLU=ON L12

L41 13631 SEA FILE=HCAPLUS ABB=ON PLU=ON CHROMATOGRAPHIC STATIONARY

PHASES+PFT,NT/CT

L42 45585 SEA FILE=HCAPLUS ABB=ON PLU=ON HPLC+PFT,NT/CT

~~L51 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (L41 OR L42)~~

STR search

123 cites for the 47 cpds

CT = controlled vocabulary

PFT = old, new

OR "used for" terms

NT = narrower term

=> d que nos 155

L1 SCR 2004 AND 1707 AND 1838

L2 SCR 970

L3 STR

L4 2405 SEA FILE=REGISTRY SSS FUL L3 AND L1 AND L2

L9 STR

L11 49 SEA FILE=REGISTRY SUB=L4 SSS FUL L9

L12 47 SEA FILE=REGISTRY ABB=ON PLU=ON L11/COM

L39 123 SEA FILE=HCAPLUS ABB=ON PLU=ON L12

L44 24051 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYMER CHAINS+NT/CT

L45 6207 SEA FILE=HCAPLUS ABB=ON PLU=ON CHEMICAL CHAINS/CT

L54 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (L44 OR L45)

~~L55 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L54 AND (CHIRAL? OR ENANTIOM?)~~

~~OR-STEREOCHEM? OR-ASYMMETRIC OR-RESOLUTION)~~

STR search

3 cites

=&gt; d que nos 156

L1 SCR 2004 AND 1707 AND 1838  
 L2 SCR 970  
 L3 STR  
 L4 2405 SEA FILE=REGISTRY SSS FUL L3 AND L1 AND L2  
 L9 STR  
 L11 49 SEA FILE=REGISTRY SUB=L4 SSS FUL L9  
 L12 47 SEA FILE=REGISTRY ABB=ON PLU=ON L11/COM  
 L39 123 SEA FILE=HCAPLUS ABB=ON PLU=ON L12  
 L43 48797 SEA FILE=HCAPLUS ABB=ON PLU=ON CROSSLINKING/CT  
~~L56~~ 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 AND L39 3 cites

=&gt; d que nos 158

L1 SCR 2004 AND 1707 AND 1838  
 L2 SCR 970  
 L3 STR  
 L4 2405 SEA FILE=REGISTRY SSS FUL L3 AND L1 AND L2  
 L9 STR  
 L11 49 SEA FILE=REGISTRY SUB=L4 SSS FUL L9  
 L12 47 SEA FILE=REGISTRY ABB=ON PLU=ON L11/COM  
 L39 123 SEA FILE=HCAPLUS ABB=ON PLU=ON L12  
 L41 13631 SEA FILE=HCAPLUS ABB=ON PLU=ON CHROMATOGRAPHIC STATIONARY  
 PHASES+PFT,NT/CT  
 L47 5205 SEA FILE=HCAPLUS ABB=ON PLU=ON CHIRALITY/CT  
 L48 736 SEA FILE=HCAPLUS ABB=ON PLU=ON CHIRAL RECOGNITION+OLD/CT  
 L49 74603 SEA FILE=HCAPLUS ABB=ON PLU=ON STEREOCHEMISTRY+PFT,NT/CT  
 L50 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (L47 OR L48 OR L49)  
~~L58~~ 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND L50 1 cite

=&gt; d que nos 180 ← looking for papers that do (hydro)silylation

L1 SCR 2004 AND 1707 AND 1838  
 L2 SCR 970  
 L3 STR  
 L4 2405 SEA FILE=REGISTRY SSS FUL L3 AND L1 AND L2  
 L9 STR  
 L11 49 SEA FILE=REGISTRY SUB=L4 SSS FUL L9  
 L12 47 SEA FILE=REGISTRY ABB=ON PLU=ON L11/COM  
 L39 123 SEA FILE=HCAPLUS ABB=ON PLU=ON L12  
 L74 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND HYDROSILYLAT?/OBI  
 L76 109 SEA FILE=HCAPLUS ABB=ON PLU=ON L39(L)(RACT OR RCT)/RL  
 L77 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L76 AND L74  
 L79 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L76 AND SILYLAT?/OBI  
~~L80~~ 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L77 OR L79 9 cites

fields searched  
 are everything  
 but the abstract

=&gt; d que nos 1110 - looking for cites using poly/oligosaccharides

L1 SCR 2004 AND 1707 AND 1838  
 L2 SCR 970  
 L3 STR  
 L4 2405 SEA FILE=REGISTRY SSS FUL L3 AND L1 AND L2  
 L9 STR  
 L11 49 SEA FILE=REGISTRY SUB=L4 SSS FUL L9  
 L12 47 SEA FILE=REGISTRY ABB=ON PLU=ON L11/COM  
 L39 123 SEA FILE=HCAPLUS ABB=ON PLU=ON L12

L105 412248 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYSACCHARIDES+PFT,NT/CT  
 L106 147008 SEA FILE=HCAPLUS ABB=ON PLU=ON OLIGOSACCHARIDES+PFT,NT/CT  
 L107 286437 SEA FILE=HCAPLUS ABB=ON PLU=ON MONOSACCHARIDES+PFT,NT/CT  
 L108 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (L105 OR L106 OR L107)  
 L109 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (?STARCH OR ?CYCLODEXTRIN OR ?CELLULOSE OR ?DEXTRIN)

~~L110 3 SEA FILE=HCAPLUS ABB=ON PLU=ON (L108 OR L109)~~ 3 cites

=> s l51 or l55-56 or l58 or l80 or l110

~~16 L51 OR (L55 OR L56) OR L58 OR L80 OR L110~~ 16 cites total

=> d ibib abs hitstr 1

~~L111 ANSWER 1 OF 16~~ HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:593320 HCAPLUS

DOCUMENT NUMBER: 137:325751

TITLE: Sign reversal of the dielectric anisotropy in the chiral nematic phase of a copolysiloxane

AUTHOR(S): Cesarino, C.; Komitov, L.; Galli, G.; Chiellini, E.

CORPORATE SOURCE: Dipartimento di Chimica e Chimica Industriale, Universita di Pisa, Pisa, 56126, Italy

SOURCE: Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (2002), Volume Date 2001, 372, 217-227  
 CODEN: MCLCE9; ISSN: 1058-725X

PUBLISHER: Taylor & Francis Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A chiral polysiloxane was prepd. from (+)-(S)-2-methylbutyl-3-nitro-4-[4'-(7-octenyl-1-oxy)benzoyloxy]-benzoate and 4-Methoxyphenyl 4-(allyloxy)benzoate by Pt catalyzed hydrosilylation of poly(methylhydrogensiloxane), to obtain side-chain liq. crystal polysiloxane structures. The chiral polysiloxane exhibited nematic N\* phase at 9-41.degree., and linear electro-optical response under an elec. field, due to the electroclinic effect. At high elec. fields, the linearity of the response was strongly affected by dielec. coupling. The influence of dielec. coupling on the electro-optical response became zero at 37.degree., attributed to a sign reversal of the dielec. anisotropy.

IT 110683-61-9P, 4-(7-Octenyl-1-oxy)benzoic acid

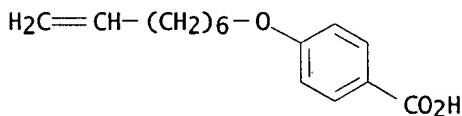
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(intermediate; prepn. and electrooptical response and dielec. anisotropy reversal of chiral nematic polysiloxane having methylbutylnitrooctenyloxy and methoxyphenyl-allyloxy benzoate side chains)

RN 110683-61-9 HCAPLUS

CN Benzoic acid, 4-(7-octenyloxy)- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d ind

L111 ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2003 ACS

CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36, 75

ST methylbutylnitrooctenyloxy benzoyloxybenzoate **hydrosilylation**  
 polymethylsiloxane liq crystal prepn; methoxyphenyl benzoate polysiloxane  
 side chain liq crystal prepn; dielec anisotropy electrooptical response  
**chiral** nematic polysiloxane; electroclinic effect side chain  
**chiral** polysiloxane liq crystal

IT Piezoelectricity  
 (electroclinic effect; prepn. and electrooptical response and dielec.  
 anisotropy reversal of **chiral** nematic polysiloxane having  
 methylbutylnitrooctenyloxy and methoxyphenyl-allyloxy benzoate side  
 chains)

IT Polysiloxanes, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (methoxyphenyl- and nitrooctenyloxy-benzoate; prepn. and electrooptical  
 response and dielec. anisotropy reversal of **chiral** nematic  
 polysiloxane having methylbutylnitrooctenyloxy and methoxyphenyl-  
 allyloxy benzoate side chains)

IT Liquid crystals, polymeric  
 (nematic N\*; prepn. and electrooptical response and dielec. anisotropy  
 reversal of **chiral** nematic polysiloxane having  
 methylbutylnitrooctenyloxy and methoxyphenyl-allyloxy benzoate side  
 chains)

IT Dielectric anisotropy  
 Electrooptical effect  
**Hydrosilylation**  
 (prep. and electrooptical response and dielec. anisotropy reversal of  
**chiral** nematic polysiloxane having methylbutylnitrooctenyloxy  
 and methoxyphenyl-allyloxy benzoate side chains)

IT **Polymer chains**  
 (side, **chiral**; prepn. and electrooptical response and dielec.  
 anisotropy reversal of **chiral** nematic polysiloxane having  
 methylbutylnitrooctenyloxy and methoxyphenyl-allyloxy benzoate side  
 chains)

IT **110683-61-9P**, 4-(7-Octenyl-1-oxy)benzoic acid 473672-04-7P,  
 (S)-(+)-2-Methylbutyl 3-nitro-4-hydroxybenzoate  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (intermediate; prepn. and electrooptical response and dielec.  
 anisotropy reversal of **chiral** nematic polysiloxane having  
 methylbutylnitrooctenyloxy and methoxyphenyl-allyloxy benzoate side  
 chains)

IT 473672-07-0P, (S)-(+)-2-Methylbutyl 3-nitro-4-[4'-(7-octenyl-1-  
 oxy)benzoyloxy]benzoate  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (monomer; prepn. and electrooptical response and dielec. anisotropy  
 reversal of **chiral** nematic polysiloxane having  
 methylbutylnitrooctenyloxy and methoxyphenyl-allyloxy benzoate side  
 chains)

IT 9004-73-3DP, Methylsilanediol homopolymer, sru, reaction products with  
 methoxyphenyl-allyloxy benzoate and methylbutylnitrooctenyloxy  
 benzoyloxybenzoate 49718-23-2DP, Poly(methylsilanediol), reaction  
 products with methoxyphenyl-allyloxy benzoate and

methylbutylnitrooctenyloxy benzoxyloxybenzoate 73376-32-6DP,  
4-Methoxyphenyl 4-(allyloxy)benzoate, reaction products with  
poly(methylhydrogensiloxane)-methylbutylnitrooctenyloxy benzoxyloxybenzoate  
473672-07-ODP, reaction products with poly(methylhydrogensiloxane)-  
methoxyphenyl-allyloxy benzoate

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and electrooptical response and dielec. anisotropy reversal of  
**chiral** nematic polysiloxane having methylbutylnitrooctenyloxy  
and methoxyphenyl-allyloxy benzoate side chains)

IT 99-96-7, 4-Hydroxybenzoic acid, reactions 616-82-0, 3-Nitro-4-  
hydroxybenzoic acid 1565-80-6, (S)-(-)-2-Methylbutanol 2695-48-9,  
8-Bromo-1-octene

RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. and electrooptical response and dielec. anisotropy reversal of  
**chiral** nematic polysiloxane having methylbutylnitrooctenyloxy  
and methoxyphenyl-allyloxy benzoate side chains)

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L111 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:369012 HCAPLUS

DOCUMENT NUMBER: 136:379289

TITLE: Chloro-, hydroxy- and alkoxy-silane derivatives of polysaccharides or oligosaccharides, polymerizable and cross-linkable, their synthesis and their use as sources of novel support materials

*applicant*

INVENTOR(S): Duval, Raphael

PATENT ASSIGNEE(S): Institut Francais du Petrole, Fr.; Chiralsep

SOURCE: U.S. Pat. Appl. Publ., 19 pp., Cont.-in-part of U.S. Ser. No. 394,868.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002058763	A1	20020516	US 2001-808190	20010315
US 6514407	B2	20030204		
FR 2784109	A1	20000407	FR 1998-11377	19980911
US 6346616	B1	20020212	US 1999-394868	19990913

PRIORITY APPLN. INFO.:

FR 1998-11377 A 19980911

US 1999-394868 A2 19990913

AB There are described chloro-, hydroxy- and alkoxy-silane derivs. of polysaccharides or oligosaccharides as novel compds. which are polymerizable and cross-linkable, and a method for obtaining them; novel support materials obtained from said derivs. and contg. said silane derivs. of polysaccharides or oligosaccharides chem. grafted by a covalent bond with the support and polymd. and cross-linked in a three-dimensional network and a method for obtaining them; as well as the use of said material supports in sepn. or in prepn. of enantiomers, through employment in gaseous, liq. or supercrit. chromatog., by electrophoresis, electrochromatog. or by percolation processes through membranes contg. said support materials.

IT 59100-95-7P, 4-(10-Undecenyloxy)benzoic acid 130747-08-9P

, 4-(10-Undecenyloxy)benzoyl chloride

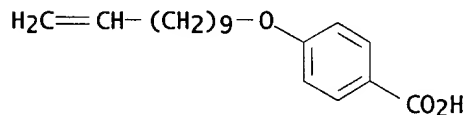
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(chloro-, hydroxy- and alkoxy-silane derivs. of polysaccharides or oligosaccharides, polymerizable and cross-linkable, synthesis and use as sources of novel support materials in chiral sepn.)

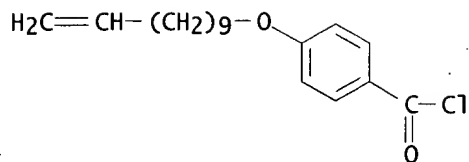
RN 59100-95-7 HCAPLUS

CN Benzoic acid, 4-(10-undecenyloxy)- (9CI) (CA INDEX NAME)



RN 130747-08-9 HCAPLUS

CN Benzoyl chloride, 4-(10-undecenyloxy)- (9CI) (CA INDEX NAME)



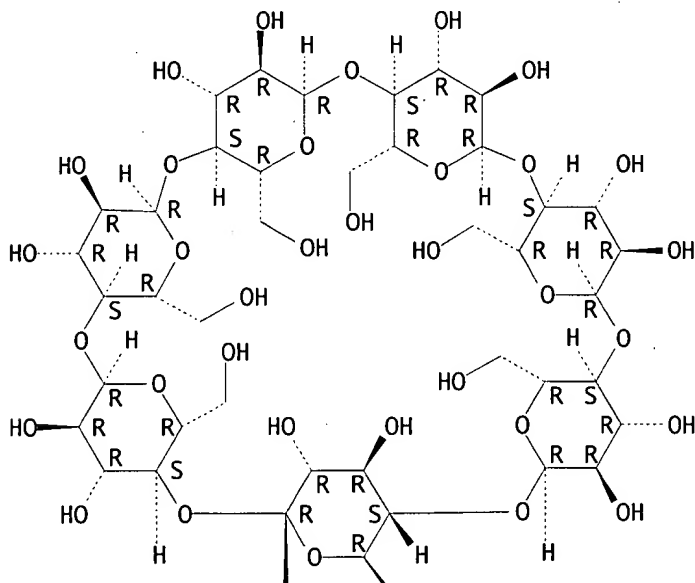
IT 7585-39-9DP, .beta.-Cyclodextrin, derivs., reaction products with silica and functionalized silanes 9004-34-6DP, Cellulose, derivs., reaction products with silica and functionalized silanes 9004-54-0DP, Dextran, derivs., reaction products with silica and functionalized silanes 9005-80-5DP, Inulin, derivs., reaction products with silica and functionalized silanes 9012-76-4DP, Chitosan, derivs., reaction products with silica and functionalized silanes 9051-97-2DP, .beta.-D-Glucan, (1.fwdarw.3)-, derivs., reaction products with silica and functionalized silanes 9057-02-7DP, Pullulan, derivs., reaction products with silica and functionalized silanes 54724-00-4DP, Curdlan, derivs., reaction products with silica and functionalized silanes  
 RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (supports; chloro-, hydroxy- and alkoxy silane derivs. of polysaccharides or oligosaccharides, polymerizable and cross-linkable, synthesis and use as sources of novel support materials in chiral sepn.)

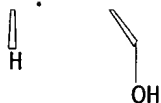
RN 7585-39-9 HCAPLUS

CN .beta.-Cyclodextrin (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

PAGE 1-A





RN 9004-34-6 HCAPLUS  
CN Cellulose (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9004-54-0 HCAPLUS  
CN Dextran (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9005-80-5 HCAPLUS  
CN Inulin (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9012-76-4 HCAPLUS  
CN Chitosan (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9051-97-2 HCAPLUS  
CN .beta.-D-Glucan, (1.fwdarw.3)- (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 9057-02-7 HCAPLUS  
CN Pullulan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 54724-00-4 HCAPLUS  
CN Curdlan (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

IC ICM C07H001-00

NCL 526123100

CC 80-3 (Organic Analytical Chemistry)

Section cross-reference(s): 43

ST chloro hydroxy alkoxy silane deriv polysaccharide oligosaccharide  
polymerizable stationary phase; silane functionalized polysaccharide  
chiral sepn; cellulose deriv silane functionalized chiral  
support

IT **Chromatographic stationary phases**

**HPLC**

**Silylation**

(chloro-, hydroxy- and alkoxy silane derivs. of polysaccharides or  
oligosaccharides, polymerizable and cross-linkable, synthesis and use  
as sources of novel support materials in chiral sepn.)

IT **Oligosaccharides, reactions**

**Polysaccharides, reactions**

RL: RCT (Reactant); RACT (Reactant or reagent)

(chloro-, hydroxy- and alkoxy silane derivs. of polysaccharides or  
oligosaccharides, polymerizable and cross-linkable, synthesis and use  
as sources of novel support materials in chiral sepn.)

IT 119-53-9, Benzoin 487-26-3, Flavanone 1439-07-2, Trans-Stilbene oxide  
3966-32-3, (R)-.alpha.-Methoxyphenyl acetic acid 5928-66-5, (R)-Benzoin  
5928-67-6, (S)-Benzoin 7021-09-2, .alpha.-Methoxyphenyl acetic acid  
13523-86-9, Pindolol 17002-31-2, (-)-Flavanone 25144-18-7,

(+)-Trans-Stilbene oxide 26164-26-1, (S)-.alpha.-Methoxyphenyl acetic acid 26328-11-0, (S)-Pindolol 27439-12-9, (+)-Flavanone 40102-60-1, (-)-Trans-Stilbene oxide 68374-35-6, (R)-Pindolol

RL: ANT (Analyte); ANST (Analytical study)

(chloro-, hydroxy- and alkoxy-silane derivs. of polysaccharides or oligosaccharides, polymerizable and cross-linkable, synthesis and use as sources of novel support materials in chiral sepn.)

- IT 98-59-9, 4-Methylbenzene sulfonyl chloride 112-43-6, 10-Undecen-1-ol 120-47-8, Ethyl 4-hydroxybenzoate 4420-74-0, 3-Mercaptopropyltrimethoxysilane 38460-95-6, 10-Undecenoyl chloride 54132-75-1, 3,5-Dimethylphenyl isocyanate

RL: RCT (Reactant); RACT (Reactant or reagent)

(chloro-, hydroxy- and alkoxy-silane derivs. of polysaccharides or oligosaccharides, polymerizable and cross-linkable, synthesis and use as sources of novel support materials in chiral sepn.)

- IT 51148-67-5P 59100-95-7P, 4-(10-Undecenyl-oxy)benzoic acid 123598-41-4P, Ethyl 4-(10-undecenyl-oxy) benzoate 130747-08-9P, 4-(10-Undecenyl-oxy)benzoyl chloride

RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(chloro-, hydroxy- and alkoxy-silane derivs. of polysaccharides or oligosaccharides, polymerizable and cross-linkable, synthesis and use as sources of novel support materials in chiral sepn.)

- IT 602-09-5P, [1,1'-Binaphthalene]-2,2'-diol 65487-67-4P, 9-Anthracenemethanol, .alpha.-(trifluoromethyl)-

RL: PUR (Purification or recovery); PREP (Preparation)

(enantiomeric sepn. of; chloro-, hydroxy- and alkoxy-silane derivs. of polysaccharides or oligosaccharides, polymerizable and cross-linkable, synthesis and use as sources of novel support materials in chiral sepn.)

- IT 170211-41-3P, Cellulose, (3,5-dimethylphenyl)carbamate 10-undecenoate

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and functionalization of; chloro-, hydroxy- and alkoxy-silane derivs. of polysaccharides or oligosaccharides, polymerizable and cross-linkable, synthesis and use as sources of novel support materials in chiral sepn.)

- IT 18531-94-7P, [1,1'-Binaphthalene]-2,2'-diol, (1R)- 18531-99-2P, [1,1'-Binaphthalene]-2,2'-diol, (1S)- 53531-34-3P, 9-Anthracenemethanol, .alpha.-(trifluoromethyl)-, (.alpha.R)- 60646-30-2P, 9-Anthracenemethanol, .alpha.-(trifluoromethyl)-, (S)-

RL: PUR (Purification or recovery); PREP (Preparation)

(sepn. of, from racemic mixts.; chloro-, hydroxy- and alkoxy-silane derivs. of polysaccharides or oligosaccharides, polymerizable and cross-linkable, synthesis and use as sources of novel support materials in chiral sepn.)

- IT 998-30-1DP, Triethoxysilane, reaction products with silica and cellulose (dimethylphenyl)carbamate undecenoate 7585-39-9DP, .beta.-Cyclodextrin, derivs., reaction products with silica and functionalized silanes 7631-86-9DP, Silica, reaction products with functionalized silanes and cellulose (dimethylphenyl)carbamate undecenoate 9004-34-6DP, Cellulose, derivs., reaction products with silica and functionalized silanes 9004-54-0DP, Dextran, derivs., reaction products with silica and functionalized silanes 9005-80-5DP, Inulin, derivs., reaction products with silica and functionalized silanes 9012-76-4DP, Chitosan, derivs., reaction products with silica and functionalized silanes 9051-95-0DP, .alpha.-1,3-Glucan, derivs., reaction products with silica and functionalized silanes

9051-97-2DP, .beta.-D-Glucan, (1.fwdarw.3)-, derivs., reaction products with silica and functionalized silanes 9051-99-4DP, .beta.-1,2-Glucan, derivs., reaction products with silica and functionalized silanes 9052-06-6DP, .beta.-D-Mannan, (1.fwdarw.4)-, derivs., reaction products with silica and functionalized silanes 9057-02-7DP, Pullulan, derivs., reaction products with silica and functionalized silanes 9063-63-2DP, .beta.-D-Xylan, (1.fwdarw.4)-, derivs., reaction products with silica and functionalized silanes 10025-78-2DP, Trichlorosilane, reaction products with silica and cellulose (dimethylphenyl)carbamate undecenoate 54724-00-4DP, Curdlan, derivs., reaction products with silica and functionalized silanes 92880-82-5DP, .beta.-D-Fructan, (2.fwdarw.1)-, derivs., reaction products with silica and functionalized silanes 170211-41-3DP, Cellulose, (3,5-dimethylphenyl)carbamate 10-undecenoate, reaction products with silica and functionalized silanes  
 RL: NUU (Other use, unclassified); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent); USES (Uses) (supports; chloro-, hydroxy- and alkoxysilane derivs. of polysaccharides or oligosaccharides, polymerizable and cross-linkable, synthesis and use as sources of novel support materials in chiral sepn.)

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L111 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:261996 HCAPLUS

DOCUMENT NUMBER: 137:47778

TITLE: Liquid crystal polysiloxane networks as materials for molecular imprinting technology: memory of the mesomorphic organization

AUTHOR(S): Marty, J.-D.; Mauzac, M.; Fournier, C.; Rico-Lattes, I.; Lattes, A.

CORPORATE SOURCE: Laboratoire des Interactions Moleculaires et Reactivite Chimique et Photochimique, U.M.R., CNRS 5623, Universite Paul Sabatier, Toulouse, 31062, Fr.

SOURCE: Liquid Crystals (2002), 29(4), 529-536

CODEN: LICRE6; ISSN: 0267-8292

PUBLISHER: Taylor &amp; Francis Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

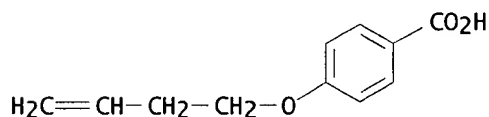
AB A novel approach to the synthesis of molecularly imprinted polymers via non-covalent linkages has been studied. It relies on the use of thermotropic side group liq. crystal polymer networks. The polysiloxane networks obtained after extn. of the template preserved the mesomorphic organization set up in the presence of the guest mol. A first batch rebinding anal. was performed: this study revealed that the imprinted polymer has a much greater affinity for the template mol. than has the non-imprinted polymer, and a significant selectivity.

IT 115595-27-2DP, 4-(3-Butenyloxy)benzoic acid, reaction products with docosadiene-crosslinked poly(Me siloxane), optionally H-bonded to diaminonaphthalene template

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. of diaminonaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))

RN 115595-27-2 HCAPLUS

CN Benzoic acid, 4-(3-butenyloxy)- (9CI) (CA INDEX NAME)



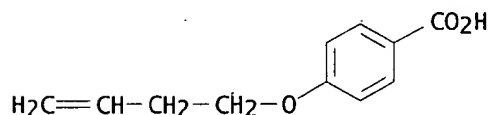
IT 115595-27-2P, 4-(3-Butenyloxy)benzoic acid

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(template H-bonding substituent; prepn. of diaminonaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))

RN 115595-27-2 HCAPLUS

CN Benzoic acid, 4-(3-butenyloxy)- (9CI) (CA INDEX NAME)



- CC 37-3 (Plastics Manufacture and Processing)  
Section cross-reference(s): 36, 75
- ST template diamionaphthalene hydrogen bonding butenyloxyphenylbenzoic acid modified polysiloxane network
- IT Phase transition enthalpy  
(isotropic-nematic; of template-imprinted liq.-cryst. polysiloxane network prepd. via **hydrosilylation** of poly(Me siloxane))
- IT Polymer morphology  
(layer spacing in smectic A phase; of template-imprinted liq.-cryst. polysiloxane network prepd. via **hydrosilylation** of poly(Me siloxane))
- IT Liquid crystals, polymeric  
(nematic; prepn. of diamionaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))
- IT Glass transition temperature  
(of template-imprinted liq.-cryst. polysiloxane network prepd. via **hydrosilylation** of poly(Me siloxane))
- IT Swelling, physical  
(prepn. of diamionaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))
- IT Liquid crystals, polymeric  
(smectic A; prepn. of diamionaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))
- IT Condensation reaction  
**Hydrosilylation**  
(template; prepn. of diamionaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))
- IT Liquid crystals, polymeric  
(thermotropic; prepn. of diamionaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))
- IT 60-29-7, Diethyl ether, uses 64-17-5, Ethanol, uses 67-64-1, Acetone, uses 67-66-3, Chloroform, uses 75-05-8, Acetonitrile, uses 108-88-3, Toluene, uses 142-82-5, Heptane, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(crosslinked diamionaphthalene template-imprinted polysiloxane network swelling in)
- IT 99-96-7, 4-Hydroxybenzoic acid, reactions 100-09-4, Anisic acid 123-31-9, Hydroquinone, reactions 619-65-8, 4-Cyanobenzoic acid 5162-44-7, 4-Bromo-1-butene  
RL: RCT (Reactant); RACT (Reactant or reagent).  
(mesogenic substituent synthesis; prepn. of diamionaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))
- IT 114482-61-0P, 4-(3-Butenyloxy)phenyl 4-methoxybenzoate 118909-86-7P, 4-(3-Butenyloxy)phenol  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(mesogenic substituent synthesis; prepn. of diamionaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))
- IT 114482-56-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(mesogenic substituent; prepn. of diamionaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of

- poly(Me siloxane))
- IT 114482-56-3DP, reaction products with docosadiene-crosslinked poly(Me siloxane) contg. pendent benzoic acid groups optionally H-bonded to diaminonaphthalene template 114482-61-ODP, 4-(3-Butenyloxy)phenyl 4-methoxybenzoate, reaction products with docosadiene-crosslinked poly(Me siloxane) contg. pendent benzoic acid groups optionally H-bonded to diaminonaphthalene template 115595-27-2DP, 4-(3-Butenyloxy)benzoic acid, reaction products with docosadiene-crosslinked poly(Me siloxane), optionally H-bonded to diaminonaphthalene template 438460-76-5DP, reaction products with butenyloxyphenylbenzoic acid optionally H-bonded to diaminonaphthalene template and butenyloxycyano- or -methoxyphenylbenzoic acids
- RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. of diaminonaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))
- IT 2243-62-1, 1,5-Diaminonaphthalene
- RL: MSC (Miscellaneous) (substrate selectivity of diaminonaphthalene template-imprinted liq.-cryst. polysiloxane network prepd. via **hydrosilylation** of poly(Me siloxane))
- IT 115595-27-2P, 4-(3-Butenyloxy)benzoic acid
- RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent) (template H-bonding substituent; prepn. of diaminonaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))
- IT 58-55-9, uses 479-27-6, 1,8-Diaminonaphthalene 1161-13-3, N-Benzoyloxycarbonyl-L-phenylalanine
- RL: NUU (Other use, unclassified); USES (Uses) (template; prepn. of diaminonaphthalene template-imprinted liq.-cryst. polysiloxane network via **hydrosilylation** of poly(Me siloxane))

REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L111 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:524123 HCAPLUS

DOCUMENT NUMBER: 135:242623

TITLE: Synthesis of new carbosilane ferroelectric  
liquid-crystalline dendrimersAUTHOR(S): Zhu, X. M.; Vinokur, R. A.; Ponomarenko, S. A.;  
Rebrov, E. A.; Muzafarov, A. M.; Boiko, N. I.;  
Shibaev, V. P.CORPORATE SOURCE: Khim. Fak., Mosk. Gos. Univ. im. M. V. Lomonosova,  
Moscow, Vorob'evy Gory, 119899, RussiaSOURCE: Vysokomolekulyarnye Soedineniya, Seriya A i Seriya B  
(2000), 42(12), 2055-2064

CODEN: VSSBEE; ISSN: 1023-3091

PUBLISHER: MAIK Nauka/Interperiodica Publishing

DOCUMENT TYPE: Journal

LANGUAGE: Russian

AB Two series of carbosilane ferroelec. LC dendrimers of the first-third generations contg. 8, 16, and 32 chiral mesogenic terminal groups, resp., were synthesized for the first time. The structure of all the synthesized compds. was studied by NMR spectroscopy. It was found that all these compds. display a chiral smectic C mesophase in a wide temp. interval. It was demonstrated that as the generation no. increases, spontaneous polarization diminishes; its max. for the dendrimer of the first generation is about 140 nC/cm<sup>2</sup>.

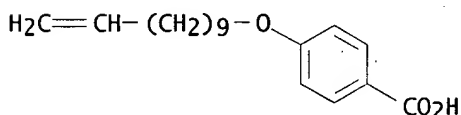
IT 59100-95-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent)

(mesogen synthesis; synthesis of carbosilane ferroelec. liq.-cryst.  
dendrimers)

RN 59100-95-7 HCAPLUS

CN Benzoic acid, 4-(10-undecenyl)- (9CI) (CA INDEX NAME)



CC 35-7 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36, 75

ST chiral smectic ferroelec carbosilane dendrimer synthesis spontaneous  
polarization

IT Liquid crystals, polymeric  
(chiral smectic; synthesis of carbosilane ferroelec. liq.-cryst.  
dendrimers)

IT Polycarbosilanes

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(dendrimers; synthesis of carbosilane ferroelec. liq.-cryst.  
dendrimers)

IT Phase transition enthalpy

Spontaneous dielectric polarization  
(of carbosilane ferroelec. liq.-cryst. dendrimers)

IT Dendritic polymers

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(polycarbosilanes; synthesis of carbosilane ferroelec. liq.-cryst.  
dendrimers)

- IT **Hydrosilylation**  
(synthesis of carbosilane ferroelec. liq.-cryst. dendrimers using)
- IT 205034-47-5DP, Allylmagnesium chloride-dichloromethylsilane copolymer, silyl-encapped mesogen terminated 333720-10-8DP, reaction products with polycarbosilane dendrimers 360794-69-ODP, reaction products with polycarbosilane dendrimers  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(liq.-cryst. G1-G3; synthesis of carbosilane ferroelec. liq.-cryst. dendrimers)
- IT 79-22-1, Methylchloroformate 687-47-8, Ethyl (S)-lactate 14180-11-1, 4-Methoxycarbonyloxybenzoic acid  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(mesogen synthesis; synthesis of carbosilane ferroelec. liq.-cryst. dendrimers)
- IT 99-96-7P, 4-Hydroxybenzoic acid, preparation 7766-50-9P  
59100-95-7P 78152-12-2P, 4-Methoxycarbonyloxybenzoyl chloride  
112726-05-3P 129281-20-5P 145163-43-5P, 4-Methoxycarbonyloxybiphenyl-4'-carboxylic acid 151419-76-0P, 4-(10-Undecen-1-yloxy)biphenyl-4'-carboxylic acid 197500-87-1P 360794-67-8P 360794-68-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(mesogen synthesis; synthesis of carbosilane ferroelec. liq.-cryst. dendrimers)
- IT 304695-27-0P 304695-28-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(mesogen; synthesis of carbosilane ferroelec. liq.-cryst. dendrimers)
- IT 333720-10-8P 360794-69-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(silylated mesogen; synthesis of carbosilane ferroelec. liq.-cryst. dendrimers)
- IT 175168-00-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(synthesis of carbosilane ferroelec. liq.-cryst. dendrimers)

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L111 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:94699 HCAPLUS

DOCUMENT NUMBER: 134:281417

TITLE: Synthesis and photoinitiated polymerization of nematic liquid-crystalline diepoxides

AUTHOR(S): Schnurpfeil, Gunter; Harder, Andreas; Schroder, Hendrik; Wohrle, Dieter; Hartwig, Andreas; Hannemann, Otto-Diedrich

CORPORATE SOURCE: Universitat Bremen, Fachbereich 2, Institut fur Organische und Makromolekulare Chemie, Bremen, 28334, Germany

SOURCE: Macromolecular Chemistry and Physics (2001), 202(1), 180-187

CODEN: MCHPES; ISSN: 1022-1352

PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Various liq. cryst. bifunctional sym. and unsym. substituted diepoxides based on the 4-(.omega.-oxiranyl-alkoxy)-benzoic acid 4-(.omega.-oxiranyl-alkoxy)-Ph esters were synthesized. By modification of the length of the flexible alkylene chains, the phase transition temp. from the cryst. into the liq. cryst. state could be adjusted between 40.degree. and 90.degree.. The phase transition behavior of the monomers was examd. by DSC. These diepoxides are capable to undergo photoinduced polymn. in the presence of a cationic photoinitiator with intramol. photosensitization in the liq. cryst. phase as well as in the isotropic phase. The photoinduced polymn. was monitored by RTIR (real time IR spectroscopy). For most monomers the rate consts. for polymn. are higher in the liq. cryst. state compared to the isotropic melt. A polymer network with liq. cryst. superstructure is formed if the polymn. of the monomers is carried out in the liq. cryst. phase. No glass-transition is measurable for the crosslinked materials, and the gel content is about 96%. Although the polymers are highly crosslinked, they are not brittle at all.

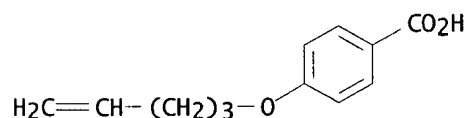
IT 14142-82-6P 115595-27-2P 115595-28-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; synthesis and photoinitiated polymn. of nematic liq.-cryst. diepoxides)

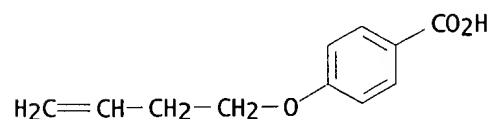
RN 14142-82-6 HCAPLUS

CN Benzoic acid, 4-(4-pentenloxy)- (9CI) (CA INDEX NAME)

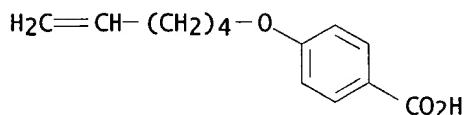


RN 115595-27-2 HCAPLUS

CN Benzoic acid, 4-(3-butenyloxy)- (9CI) (CA INDEX NAME)



RN 115595-28-3 HCAPLUS  
 CN Benzoic acid, 4-(5-hexenyloxy)- (9CI) (CA INDEX NAME)



- CC 37-2 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 35, 75
- ST diepoxide liq cryst prepn photopolymn; phase transition diepoxide liq  
 cryst
- IT Polyethers, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (epoxy-polyester-, liq. cryst.; synthesis and photoinitiated polymn. of  
 nematic liq.-cryst. diepoxides)
- IT Polyesters, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (epoxy-polyether-, liq. cryst.; synthesis and photoinitiated polymn. of  
 nematic liq.-cryst. diepoxides)
- IT **Crosslinking**  
 Crosslinking catalysts  
 Crosslinking kinetics  
 (photochem.; synthesis and photoinitiated polymn. of nematic  
 liq.-cryst. diepoxides)
- IT Epoxy resins, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (polyester-polyether-, liq. cryst.; synthesis and photoinitiated  
 polymn. of nematic liq.-cryst. diepoxides)
- IT Liquid crystals  
 Liquid crystals, polymeric  
 (synthesis and photoinitiated polymn. of nematic liq.-cryst.  
 diepoxides)
- IT Phase transition  
 Polymer morphology  
 (synthesis, properties, and photoinitiated polymn. of nematic  
 liq.-cryst. diepoxides)
- IT **14142-82-6P** 28084-48-2P **115595-27-2P**  
**115595-28-3P** 146063-24-3P 153881-38-0P 291752-51-7P  
 333721-93-0P 333721-94-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (intermediate; synthesis and photoinitiated polymn. of nematic  
 liq.-cryst. diepoxides)
- IT 146063-25-4P 153881-40-4P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (liq. cryst., monomer; synthesis and photoinitiated polymn. of nematic  
 liq.-cryst. diepoxides)
- IT 291752-52-8P 333721-95-2P 333721-96-3P  
 RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP  
 (Preparation); RACT (Reactant or reagent)  
 (liq. cryst.; synthesis and photoinitiated polymn. of nematic  
 liq.-cryst. diepoxides)
- IT 146268-28-2P 291752-57-3P 333721-97-4P 333721-98-5P 333721-99-6P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (liq. cryst.; synthesis and photoinitiated polymn. of nematic

liq.-cryst. diepoxides)  
 IT 321659-42-1  
 RL: CAT (Catalyst use); USES (Uses)  
 (photoinitiator; synthesis and photoinitiated polymn. of nematic  
 liq.-cryst. diepoxides)  
 IT 99-96-7, 4-Hydroxybenzoic acid, reactions 106-95-6, Allyl bromide,  
 reactions 120-47-8, Ethyl 4-hydroxybenzoate 123-31-9, Hydroquinone,  
 reactions 1119-51-3, 5-Bromo-1-pentene 2695-47-8, 6-Bromo-1-hexene  
 5162-44-7, 4-Bromo-1-butene  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (starting material; synthesis and photoinitiated polymn. of nematic  
 liq.-cryst. diepoxides)  
 IT 6411-34-3P 85234-58-8P 118909-86-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (synthesis and photoinitiated polymn. of nematic liq.-cryst.  
 diepoxides)  
 REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L111 ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:818567 HCAPLUS

DOCUMENT NUMBER: 134:143854

TITLE: Self-Assembly of .beta.-Glucosidase and  
D-Glucose-Tethering Zeolite Crystals into Fibrous  
AggregatesAUTHOR(S): Lee, Goo Soo; Lee, Yun-Jo; Choi, So Yeun; Park, Yong  
Soo; Yoon, Kyung ByungCORPORATE SOURCE: Center for Microcrystal Assembly and Department of  
Chemistry, Sogang University, Seoul, 121-742, S. KoreaSOURCE: Journal of the American Chemical Society (2000),  
122(49), 12151-12157

CODEN: JACSAT; ISSN: 0002-7863

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 134:143854

AB .beta.-Glucosidase and D-glucose-tethering micrometer-sized zeolite crystals self-assemble into thin (2-20 .mu.m) and very long (>1 cm) fibrous aggregates in water. The process proceeds at a faster rate in a buffer soln. of pH 4.8 at which the enzymic activity is highest. The zeolite and enzyme remain intact within the fibrous material. Furthermore, the enzymic activity of .beta.-glucosidase is preserved even after they are kept in water for more than 6 mo at room temp. With the zeolite to enzyme wt. ratio of 5, all the zeolite crystals are buried within the round fibrils which consist of either a single strand or helical double strands. Upon increasing the ratio to 10, clusters of unburied zeolite crystals appear on the exterior of the fibrils, while narrow flat fibers with smooth surfaces are formed upon decreasing the ratio to 2.5. The process is proposed to initiate by the tight binding between the zeolite-bound D-glucose moieties and .beta.-glucosidase followed by crystn. of the enzyme over the zeolite-bound enzyme monolayer. This report thus reveals a novel behavior of .beta.-glucosidase and demonstrates an unprecedented phenomenon that an enzyme and its substrate-tethering inorg. crystals self-assemble into structured aggregates.

IT 528-50-7, D-Cellobiose 2492-87-7, p-Nitrophenyl

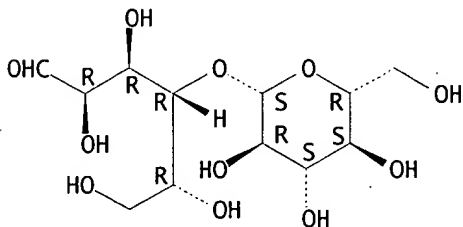
.beta.-D-glucopyranoside

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL  
(Biological study); PROC (Process)(self-assembly of .beta.-glucosidase and D-glucose-tethering zeolite  
crystals into fibrous aggregates)

RN 528-50-7 HCAPLUS

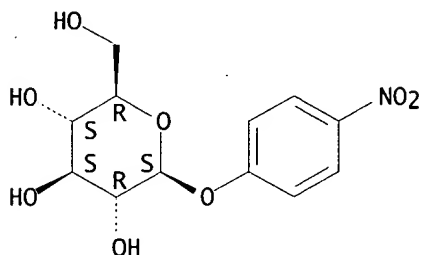
CN D-Glucose, 4-O-.beta.-D-glucopyranosyl- (6CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 2492-87-7 HCAPLUS  
 CN .beta.-D-Glucopyranoside, 4-nitrophenyl (9CI) (CA INDEX NAME)

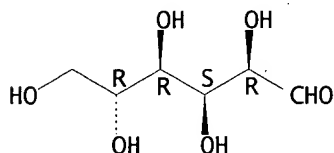
Absolute stereochemistry.



IT 50-99-7, D-Glucose, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (self-assembly of .beta.-glucosidase and D-glucose-tethering zeolite  
 crystals into fibrous aggregates)

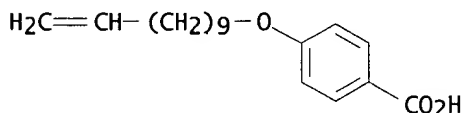
RN 50-99-7 HCAPLUS  
 CN D-Glucose (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 59100-95-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (self-assembly of .beta.-glucosidase and D-glucose-tethering zeolite  
 crystals into fibrous aggregates)

RN 59100-95-7 HCAPLUS  
 CN Benzoic acid, 4-(10-undecenyl)- (9CI) (CA INDEX NAME)



CC 7-8 (Enzymes)  
 Section cross-reference(s): 33  
 ST glucosidase glucose zeolite self assembly fiber  
 IT Immobilization, biochemical  
 (enzyme; self-assembly of .beta.-glucosidase and D-glucose-tethering  
 zeolite crystals into fibrous aggregates)  
 IT A zeolites  
 Zeolite ZSM-5  
 RL: BPR (Biological process); BSU (Biological study, unclassified); PEP  
 (Physical, engineering or chemical process); RCT (Reactant); SPN  
 (Synthetic preparation); BIOL (Biological study); PREP (Preparation); PROC  
 (Process); RACT (Reactant or reagent)

(reaction products with glucose trimethoxysilyl deriv.; self-assembly of .beta.-glucosidase and D-glucose-tethering zeolite crystals into fibrous aggregates)

- IT Crystal growth  
(self-assembly of .beta.-glucosidase and D-glucose-tethering zeolite crystals into fibrous aggregates)
- IT A zeolites  
Zeolite ZSM-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(self-assembly of .beta.-glucosidase and D-glucose-tethering zeolite crystals into fibrous aggregates)
- IT 9001-22-3, .beta.-Glucosidase  
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process)  
(self-assembly of .beta.-glucosidase and D-glucose-tethering zeolite crystals into fibrous aggregates)
- IT 528-50-7, D-Cellobiose 2492-87-7, p-Nitrophenyl  
.beta.-D-glucopyranoside  
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)  
(self-assembly of .beta.-glucosidase and D-glucose-tethering zeolite crystals into fibrous aggregates)
- IT 50-99-7, D-Glucose, reactions 123-08-0, 4-Hydroxybenzaldehyde  
2487-90-3, Trimethoxysilane 7766-50-9, 11-Bromo-1-undecene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(self-assembly of .beta.-glucosidase and D-glucose-tethering zeolite crystals into fibrous aggregates)
- IT 13100-46-4P 37074-90-1P 59100-95-7P 110458-66-7P  
324047-51-0P 324047-52-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(self-assembly of .beta.-glucosidase and D-glucose-tethering zeolite crystals into fibrous aggregates)

REFERENCE COUNT: 37 THERE ARE 37 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L111 ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:667704 HCAPLUS

DOCUMENT NUMBER: 133:351364

TITLE: A Simple and Versatile Synthetic Route for the Preparation of Main-Chain, Liquid-Crystalline Elastomers

AUTHOR(S): Donnio, Bertrand; Wermter, Hendrik; Finkelmann, Heino

CORPORATE SOURCE: Institut fuer Makromolekulare Chemie, Albert-Ludwigs Universitaet, Freiburg, D-79104, Germany

SOURCE: Macromolecules (2000), 33(21), 7724-7729

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A new synthetic concept has been successfully used for the prepn. of main-chain, liq.-cryst. elastomers (MC-LCEs). This approach consists of a one-step, platinum-catalyzed hydrosilylation between a low molar mass divinyl nematogen and a mixt. of 1,1,3,3-tetramethyldisiloxane and 2,4,6,8-tetramethylcyclotetrasiloxane (in the appropriate equimolar amt.), the disiloxane being used for the polymer chain extension and the tetrasiloxane as the cross-linker. Three new MC-LCEs were prepd. accordingly for which either the mesogenic unit or the crosslinking d. was changed, further proving the versatility of the method. The mesomorphic properties include smectic C (SC) and nematic (N) phases as characterized by polarized optical microscopy (POM), differential scanning calorimetry (DSC), and X-ray diffraction (XRD).

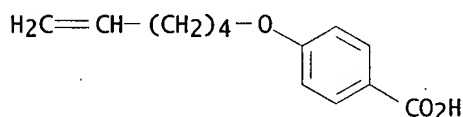
IT 115595-28-3, 4-[Hex-5-enyloxy]benzoic acid

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. and characterization of main-chain, liq.-cryst. elastomers)

RN 115595-28-3 HCAPLUS

CN Benzoic acid, 4-(5-hexenyloxy)- (9CI) (CA INDEX NAME)



CC 39-4 (Synthetic Elastomers and Natural Rubber)

Section cross-reference(s): 35, 75

ST elastomer liq crystal disiloxane chain extension; platinum catalyzed hydrosilylation tetramethyldisiloxane tetramethylcyclotetrasiloxane vinyl nematogen

IT Hydrosilylation catalysts

(dichloro(1,5-cyclooctadiene)platinum; prepn. and characterization of main-chain, liq.-cryst. elastomers)

IT Crystal structure

Liquid crystals, polymeric

(prepn. and characterization of main-chain, liq.-cryst. elastomers)

IT Rubber, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(prepn. and characterization of main-chain, liq.-cryst. elastomers)

IT Molecular structure-property relationship

(thermal; prepn. and characterization of main-chain, liq.-cryst. elastomers)

IT 12080-32-9, Dichloro(1,5-cyclooctadiene)platinum

RL: CAT (Catalyst use); USES (Uses)

(prepn. and characterization of main-chain, liq.-cryst. elastomers)

IT 2370-88-9DP, 2,4,6,8-Tetramethylcyclotetrasiloxane,  
**hydrosilylation** product with vinyl-contg. polyester liq. crystal  
3277-26-7DP, 1,1,3,3-Tetramethyldisiloxane, **hydrosilylation**  
product with vinyl-contg. polyester liq. crystal 103493-56-7P,  
4-(Hex-5-enyloxy)phenol 153881-38-OP 188639-02-3P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Préparation)

(prepn. and characterization of main-chain, liq.-cryst. elastomers)

IT 95-71-6, 2-Methyl-hydroquinone 115595-28-3, 4-[Hex-5-  
enyloxy]benzoic acid

RL: RCT (Reactant); RACT (Reactant or reagent)

(prepn. and characterization of main-chain, liq.-cryst. elastomers)

REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L111 ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:749986 HCAPLUS

DOCUMENT NUMBER: 132:108431

TITLE: Partially deuterated side-chain liquid crystalline monomers and polymers: characterization and order by <sup>2</sup>H NMR

AUTHOR(S): Catalano, D.; Chiellini, E.; Chiezzì, L.; Fodor-Csorba, K.; Galli, G.; Gacs-Baitz, E.; Holly, S.; Veracini, C. A.

CORPORATE SOURCE: Dipartimento di Chimica e Chimica Industriale, Università di Pisa, Pisa, 56126, Italy

SOURCE: Molecular Crystals and Liquid Crystals Science and Technology, Section A: Molecular Crystals and Liquid Crystals (1999), 336, 111-122  
CODEN: MCLCE9; ISSN: 1058-725X

PUBLISHER: Gordon &amp; Breach Science Publishers

DOCUMENT TYPE: Journal

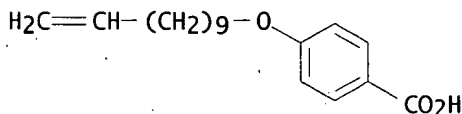
LANGUAGE: English

AB Two partially deuterated liq. cryst. monomer precursors (R)-4-[(2-Chloropropyl)oxycarbonyl]phenyl 4-(10-undecenyl)benzoate-d<sub>4</sub> (I), (R)-4-[(2-methylpropyl)oxycarbonyl]phenyl 4-(10-undecenyl)benzoate-d<sub>4</sub> (II), and polysiloxanes from poly(methylhydrogensiloxane) deriv. contg. the precursor moiety in the side-chain were prepd. The principal order parameter and biaxiality of the monomers were detd. from <sup>1</sup>H and <sup>2</sup>H NMR spectra; the fully protonated ring was slightly more oriented than the partially deuterated one, the two rings forming an angle of 11-120 degrees. The <sup>2</sup>H orientational order of the polymers showed the coexistence of different phases over certain temp. ranges; the more oriented phase and the less oriented phase were in approx. 1:1 ratio at 100.degree.. On cooling, this ratio increased progressively and became 4:1 at 40.degree., this effect is due to a diln. effect of the non-mesogenic units. The orientational order of the side chain mesogens was evaluated from the quadrupolar splittings and by assuming the same mol. structure and biaxiality as for the monomers.

IT 59100-95-7P, 4-(10-Undecenyl)benzoic acid  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate; temp. dependent orientational order and phase structure of partially deuterated **chiral** liq. cryst. as side-chain on polysiloxane studied by <sup>2</sup>H NMR)

RN 59100-95-7 HCAPLUS

CN Benzoic acid, 4-(10-undecenyl)- (9CI) (CA INDEX NAME)



CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36, 75

ST **chiral** chloropropylloxycarbonyl phenylundecenyl benzoate side chain polysiloxane; methylpropylloxycarbonyl phenylundecenyl benzoate **chiral** deuterated side chain; liq. cryst polysiloxane  
**chiral** side chain orientational order

IT Polysiloxanes, preparation

- RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(chloro- or methyl-propyloxycarbonylphenyl undecenyl oxy benzoates,  
deuterated; temp. dependent orientational order and phase structure of  
partially deuterated **chiral** liq. cryst. as side-chain on  
polysiloxane studied by 2H NMR)
- IT **Polymer chains**  
(orientational order; temp. dependent orientational order and phase  
structure of partially deuterated **chiral** liq. cryst. as  
side-chain on polysiloxane studied by 2H NMR)
- IT **Polymer morphology**  
(phase; temp. dependent orientational order and phase structure of  
partially deuterated **chiral** liq. cryst. as side-chain on  
polysiloxane studied by 2H NMR)
- IT **NMR (nuclear magnetic resonance)**  
(quadrupolar splitting; temp. dependent orientational order and phase  
structure of partially deuterated **chiral** liq. cryst. as  
side-chain on polysiloxane studied by 2H NMR)
- IT **Polymer chains**  
(side; temp. dependent orientational order and phase structure of  
partially deuterated **chiral** liq. cryst. as side-chain on  
polysiloxane studied by 2H NMR)
- IT **Liquid crystals, polymeric**  
**Orientational order**  
(temp. dependent orientational order and phase structure of partially  
deuterated **chiral** liq. cryst. as side-chain on polysiloxane  
studied by 2H NMR)
- IT 255845-61-5P 255845-62-6DP, reaction products with  
poly(methylhydrogensiloxane)  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(**chiral** side chain; temp. dependent orientational order and  
phase structure of partially deuterated **chiral** liq. cryst. as  
side-chain on polysiloxane studied by 2H NMR)
- IT 9004-73-3DP, Methylsilanediol homopolymer, sru, reaction products with  
chloro- or methyl-propyloxycarbonylphenyl undecenyl oxy benzoates  
49718-23-2DP, Poly(methylsilanediol), reaction products with chloro- or  
methyl-propyloxycarbonylphenyl undecenyl oxy benzoates  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(**chiral**, partially deuterated; temp. dependent orientational  
order and phase structure of partially deuterated **chiral** liq.  
cryst. as side-chain on polysiloxane studied by 2H NMR)
- IT 15552-32-6P, 4-(Ethoxycarbonyloxy)benzoic acid **59100-95-7P**,  
4-(10-Undecenyl oxy)benzoic acid 115146-67-3P, (R)-2-Chloropropyl  
4-hydroxybenzoate 189076-28-6P, (R)-2-Chloropropyl 4-  
(ethoxycarbonyloxy)benzoate  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(intermediate; temp. dependent orientational order and phase structure  
of partially deuterated **chiral** liq. cryst. as side-chain on  
polysiloxane studied by 2H NMR)
- IT 255845-61-5DP, reaction products with poly(methylhydrogensiloxane)  
255845-62-6DP, reaction products with poly(methylhydrogensiloxane)  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(temp. dependent orientational order and phase structure of partially  
deuterated **chiral** liq. cryst. as side-chain on polysiloxane  
studied by 2H NMR)
- IT 79-37-8, Oxalyl chloride 99-96-7, 4-Hydroxybenzoic acid, reactions  
541-41-3, Ethyl chloroformate 7766-50-9, 1-Bromo-10-undecene  
7789-20-0, Water-d<sub>2</sub> 37493-14-4, (R)-(-)-2-Chloro-1-propanol  
RL: RCT (Reactant); RACT (Reactant or reagent)

KRISHNAN 09/541,690

(temp. dependent orientational order and phase structure of partially  
deuterated **chiral** liq. cryst. as side-chain on polysiloxane  
studied by 2H NMR)

REFERENCE COUNT: 6

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L111 ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:801387 HCAPLUS

DOCUMENT NUMBER: 130:168742

TITLE: Ferroelectric liquid crystalline polymers

AUTHOR(S): Vargha, Viktoria; Fodor-Csorba, Katalin; Pozsgay, Andras Gyorgy

CORPORATE SOURCE: Budapesti Muszaki Egyetem, Muanyag-es Gumiipari Tanszek, Magyar Tudomanyos Akademia Kemiai Kutatokozpont Kemiai Intezet, Hung.

SOURCE: Muanyag es Gumi (1998), 35(11), 323-330

CODEN: MUGUAO; ISSN: 0027-2914

PUBLISHER: Gepipari Tudomanyos Egyesulet

DOCUMENT TYPE: Journal

LANGUAGE: Hungarian

AB Ferroelec. liq. cryst. polymers (FLCP) are comb-like polymers contg. the mesogen groups, responsible for ferroelec. liq. cryst. properties, in the side chain. According to the structure of the backbone, polyacrylates, polymethacrylates, polyethers, poly(vinyl ether)s, poly(vinyl esters), and polysiloxanes can be distinguished. As the temps. of phase transition of polysiloxanes are in room temp. range, they are of highest practical importance for ferroelec. display applications. For hydrosilylation poly(Me hydrosiloxane) has been selected. As monomeric compd. for hydrosilylation the (S)-(-)-4-(2-methylbutoxyphenyl) 4'-(10-undecenyl)oxy)benzoate has been prepd. in five reaction steps. All the intermediates during monomer synthesis were of high purity, the purity of the final product, was 60%.

IT 59100-95-7P, 4-(10-Undecenyl)oxy)benzoic acid

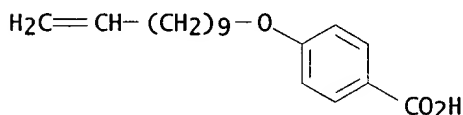
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(mesogen synthesis; prepn. of ferroelec. liq. cryst. polymers by hydrosilylation)

RN 59100-95-7 HCAPLUS

CN Benzoic acid, 4-(10-undecenyl)oxy)- (9CI) (CA INDEX NAME)



CC 35-8 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 75

ST ferroelec liq cryst polysiloxane synthesis hydrosilylation

IT **Hydrosilylation**

Liquid crystals, polymeric

(prepn. of ferroelec. liq. cryst. polymers by hydrosilylation)

IT Polysiloxanes, preparation

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)

(prepn. of ferroelec. liq. cryst. polymers by hydrosilylation)

IT 98-59-9, Tosyl chloride 99-96-7, reactions 112-43-6, 10-Undecenyl alcohol 123-31-9, 1,4-Benzenediol, reactions 137-32-6 1565-80-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(mesogen synthesis; prepn. of ferroelec. liq. cryst. polymers by hydrosilylation)

IT 7766-50-9P, 11-Bromo-1-Undecene 38261-81-3P, (S)-2-Methylbutyl tosylate

59100-95-7P, 4-(10-Undecenyl)oxy)benzoic acid 84452-60-8P,

2-Methylbutyl 4-hydroxybenzoate 95880-51-6P, p-[(S)-2-Methylbutoxy]phenol

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(mesogen synthesis; prepn. of ferroelec. liq. cryst. polymers by hydrosilation)

IT 117529-63-2P, (S)-4-(2-Methylbutoxy)phenyl 4'-(10-undecenyloxy)benzoate 131075-25-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(mesogen; prepn. of ferroelec. liq. cryst. polymers by hydrosilation)

IT 9004-73-3DP, Methylsilanediol homopolymer, sru, hydrosilation products 49718-23-2DP, Methylsilanediol homopolymer, hydrosilation products

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. of ferroelec. liq. cryst. polymers by hydrosilation)

IT 117529-63-2DP, (S)-4-(2-Methylbutoxy)phenyl 4'-(10-undecenyloxy)benzoate, reaction products with poly(Me hydrogen siloxane) 131075-25-7DP, reaction products with poly(Me hydrogen siloxane)

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of ferroelec. liq. cryst. polymers by hydrosilation)

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L111 ANSWER 10 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:618681 HCAPLUS

DOCUMENT NUMBER: 129:277585

TITLE: Chiral compounds, their synthesis, the supported compounds, and their use in asymmetric synthesis or in optical resolution

INVENTOR(S): Duval, Raphael; Leveque, Hubert

PATENT ASSIGNEE(S): Institut Francais du Petrole, Fr.; Chiralsep S.a.r.l.

SOURCE: Eur. Pat. Appl., 21 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: French

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 864586	A2	19980916	EP 1998-400501	19980303
EP 864586	A3	19990120		
EP 864586	B1	20020403		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
FR 2760752	A1	19980918	FR 1997-3076	19970314
AT 215520	E	20020415	AT 1998-400501	19980303
ES 2175630	T3	20021116	ES 1998-400501	19980303
AU 9858322	A1	19980917	AU 1998-58322	19980311
AU 744412	B2	20020221		
CA 2230143	AA	19980914	CA 1998-2230143	19980313
NO 9801128	A	19980915	NO 1998-1128	19980313
JP 11043447	A2	19990216	JP 1998-65358	19980316
US 6342592	B1	20020129	US 1998-39266	19980316

PRIORITY APPLN. INFO.: FR 1997-3076 A 19970314

OTHER SOURCE(S): MARPAT 129:277585

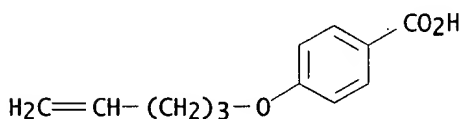
AB A bifunctional alkenyl(aryl)oxyaryl compd. (RCH:CHYO)nXQ [Q = functional group reactive towards active H; R = H, OH, alkyl, alkoxy, (un)substituted aryl; X = arom. residue; Y = C>1 alkylene, arylene; n = 1-20] is treated with a chiral alc., amine, or mercaptan (or a precursor thereof) to give the desired product. Thus, 4-CH<sub>2</sub>:CH(CH<sub>2</sub>)<sub>3</sub>OC<sub>6</sub>H<sub>4</sub>CO<sub>2</sub>H was prepd. and converted to 4-CH<sub>2</sub>:CH(CH<sub>2</sub>)<sub>3</sub>OC<sub>6</sub>H<sub>4</sub>NCO via the azide. 4-CH<sub>2</sub>:CHCH<sub>2</sub>OC<sub>6</sub>H<sub>4</sub>NCO reacted with microcryst. cellulose in the presence of 4-(dimethylamino)pyridine to give the cellulose tricarbamate deriv., which then reacted with mercaptopropylated SiO<sub>2</sub> to give a chromatog. substrate.

IT 14142-82-6P, 4-(4-Pentenylloxy)benzoic acid 14142-84-8P 213599-37-2P

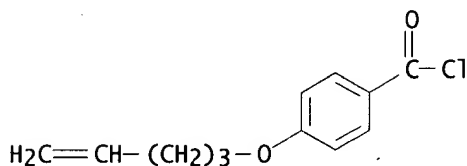
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. of chiral chromatog. substrates)

RN 14142-82-6 HCAPLUS

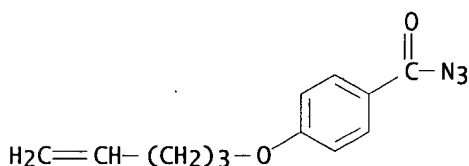
CN Benzoic acid, 4-(4-pentenylloxy)- (9CI) (CA INDEX NAME)



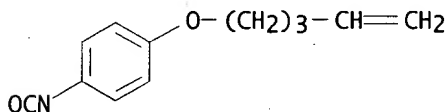
RN 14142-84-8 HCAPLUS  
 CN Benzoyl chloride, 4-(4-pentenyl)- (9CI) (CA INDEX NAME)



RN 213599-37-2 HCAPLUS  
 CN Benzoyl azide, 4-(4-pentenyl)- (9CI) (CA INDEX NAME)



IT 213599-38-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of chiral chromatog. substrates)  
 RN 213599-38-3 HCAPLUS  
 CN Benzene, 1-isocyanato-4-(4-pentenyl)- (9CI) (CA INDEX NAME)



IC ICM C08B037-00  
 ICS C08B015-08; B01D015-08; C07B057-00  
 CC 43-3 (Cellulose, Lignin, Paper, and Other Wood Products)  
 Section cross-reference(s): 21, 66  
 ST chiral chromatog substrate cellulose carbamate  
 IT **Chromatographic stationary phases**  
 (chiral; prepn. of chiral chromatog. substrates)  
 IT Resolution (separation)  
 (chromatog.; prepn. of chiral chromatog. substrates)  
 IT **Asymmetric synthesis and induction**  
 (prepn. of chiral chromatog. substrates)  
 IT 99-76-3 1119-51-3, 5-Bromo-1-pentene 2487-97-0, 4-(Allyloxy)phenyl  
 isocyanate 54132-75-1, 3,5-Dimethylphenyl isocyanate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (prepn. of chiral chromatog. substrates)  
 IT 4420-74-ODP, (3-Mercaptopropyl)trimethoxysilane, reaction products with  
 silica 7631-86-9DP, Silica, reaction products with (3-  
 mercaptopropyl)trimethoxysilane, reactions 14142-82-6P,  
 4-(4-Pentenyl)benzoic acid 14142-84-8P 213599-37-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (prepn. of chiral chromatog. substrates)

IT 213599-38-3P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of chiral chromatog. substrates)

IT 213702-10-4DP, reaction products with (mercaptopropyl)silica

213702-11-5DP, reaction products with (mercaptopropyl)silica

RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)

(prepn. of chiral chromatog. substrates)

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L111 ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:12558 HCAPLUS

DOCUMENT NUMBER: 126:89877

TITLE: Side-Chain Liquid-Crystalline Polysiloxanes via Anionic Polymerization: (n-Undecyloxyarenecarboxylic Acid Mesogens Linked to Poly(dimethylsiloxane-co-methylvinylsiloxane)

AUTHOR(S): Hempenius, Mark A.; Lammertink, Rob G. H.; Vancso, G. Julius

CORPORATE SOURCE: University of Twente, Enschede, 7500 AE, Neth.

SOURCE: Macromolecules (1997), 30(2), 266-272

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A novel, anionic route to well-defined side-chain liq.-cryst. polysiloxanes is described. The usual cationic approach to these polymers leads to polydisperse materials with uncontrolled microstructures. Ring-opening polymn. of pentamethylvinylcyclotrisiloxane yielded a poly(dimethylsiloxane-co-methylvinylsiloxane) with a low polydispersity ( $M_w/M_n = 1.16$ ), a controlled molar mass, and a uniform distribution of pendant vinyl groups along the chain. Vinyl-contg. mesogenic mols. could be attached to the polysiloxane vinyl groups in a two-step hydrosilylation reaction by means of the coupling agent 1,1,3,3-tetramethyldisiloxane, yielding polymers with regularly spaced side groups. The flexible disiloxane link increases the mobility of the mesogenic moieties. In this study, 4-(n-undecyloxy)benzoic acid and the novel side group 4'-(n-undecyloxy)-4-biphenylcarboxylic acid were used as mesogens. The thermal behavior of the side-chain liq.-cryst. polymers was investigated by means of differential scanning calorimetry and optical microscopy.

IT 59100-95-7P; 4-(10-Undecenyl)benzoic acid

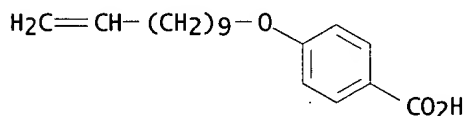
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(intermediate; in prepn. of hydrosilation agents for prepn. of side-chain liq.-cryst. siloxanes contg. n-undecyloxyarenecarboxylic acid mesogens linked to poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane link)

RN 59100-95-7 HCAPLUS

CN Benzoic acid, 4-(10-undecenyl)- (9CI) (CA INDEX NAME)



CC 35-7 (Chemistry of Synthetic High Polymers)

ST liq. cryst. siloxane undecyloxyarenecarboxylic acid mesogen; anionic polymn. cyclosiloxane liq. cryst. siloxane

IT Polymerization

(anionic; in prepn. of side-chain liq.-cryst. siloxanes contg. (n-undecyloxyarenecarboxylic acid mesogens linked to poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane link)

IT Polysiloxanes, preparation

- RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(liq. cryst.; prepn. of side-chain liq.-cryst. siloxanes contg.  
(n-undecyloxyarenecarboxylic acid mesogens linked to  
poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane  
link)
- IT Polymerization  
(ring-opening; in prepn. of side-chain liq.-cryst. siloxanes contg.  
(n-undecyloxyarenecarboxylic acid mesogens linked to  
poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane  
link)
- IT Liquid crystals, polymeric  
(siloxanes; side-chain liq.-cryst. siloxanes contg.  
(n-undecyloxyarenecarboxylic acid mesogens linked to  
poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane  
link)
- IT 185531-90-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(**hydrosilylation** agent; for prepn. of side-chain liq.-cryst.  
siloxanes contg. (n-undecyloxyarenecarboxylic acid mesogens linked to  
poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane  
link)
- IT 185531-98-0P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(**hydrosilylation** agent; for prepn. of side-chain liq.-cryst.  
siloxanes contg. n-undecyloxyarenecarboxylic acid mesogens linked to  
poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane  
link)
- IT 59100-95-7P, 4-(10-Undecenyl)benzoic acid 123598-41-4P, Ethyl  
4-(10-undecenyl)benzoate 164986-16-7P 178749-02-5P, p-Methoxybenzyl  
4'-hydroxy-4-biphenylcarboxylate 185531-94-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent)  
(intermediate; in prepn. of hydrosilation agents for prepn. of  
side-chain liq.-cryst. siloxanes contg. n-undecyloxyarenecarboxylic  
acid mesogens linked to poly(dimethylsiloxane-co-methylvinylsiloxane)  
via flexible disiloxane link)
- IT 185532-00-7P 185532-04-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(intermediate; in prepn. of mesogen model compd. for study of  
side-chain liq.-cryst. siloxanes contg. n-undecyloxyarenecarboxylic  
acid mesogens linked to poly(dimethylsiloxane-co-methylvinylsiloxane)  
via flexible disiloxane link)
- IT 185532-05-2P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(model compd. mesogen; in prepn. of side-chain liq.-cryst. siloxanes  
contg. (n-undecyloxyarenecarboxylic acid mesogens linked to  
poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane  
link)
- IT 185532-02-9P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(model compd. mesogen; in prepn. of side-chain liq.-cryst. siloxanes  
contg. n-undecyloxyarenecarboxylic acid mesogens linked to  
poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane  
link)
- IT 18395-32-9P, Pentamethylvinylcyclotrisiloxane  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(monomer; for prepn. of side-chain liq.-cryst. siloxanes contg.

(n-undecyloxyarenecarboxylic acid mesogens linked to poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane link)

- IT 95243-85-9DP, tert-butyl dimethylsilyl- and trimethylsilyl-terminated, reaction products with n-undecylarenecarboxylates, hydrogenolizates  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of side-chain liq.-cryst. siloxanes contg. (n-undecyloxyarenecarboxylic acid mesogens linked to poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane link)
- IT 105-13-5, 4-Methoxybenzyl alcohol 120-47-8, Ethyl 4-hydroxybenzoate  
 824-94-2, 4-Methoxybenzyl chloride 3277-26-7, 1,1,3,3-Tetramethyldisiloxane 51148-67-5, 10-Undecenyl tosylate 58574-03-1, 4'-Hydroxy-4-biphenylcarboxylic acid  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reactant; in prepn. of hydrosilation agents for prepn. of side-chain liq.-cryst. siloxanes contg. n-undecyloxyarenecarboxylic acid mesogens linked to poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane link)
- IT 124-70-9, Dichloromethylvinylsilane 1118-15-6, 1,3-Tetramethyldisiloxanediol  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reactant; in prepn. of side-chain liq.-cryst. siloxanes contg. (n-undecyloxyarenecarboxylic acid mesogens linked to poly(dimethylsiloxane-co-methylvinylsiloxane) via flexible disiloxane link)

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L111 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:246198 HCAPLUS

DOCUMENT NUMBER: 125:12340

TITLE: Synthesis and curing of novel LC twin epoxy monomers for liquid crystal thermosets

AUTHOR(S): Shiota, Atsushi; Ober, Christopher K.

CORPORATE SOURCE: Department Materials Science and Engineering, Cornell University, Ithaca, NY, 14853-1501, USA

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1996), 34(7), 1291-303  
CODEN: JPACEC; ISSN: 0887-624X

PUBLISHER: Wiley

DOCUMENT TYPE: Journal

LANGUAGE: English

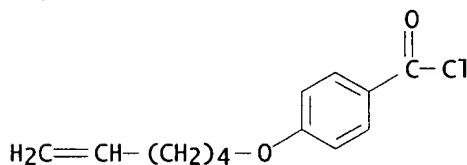
AB This article describes the synthesis and characterization of new liq. cryst. thermosets having a twin structure. Nematic epoxy-terminated monomers based on a Ph benzoate twin mesogen connected by an alkylene spacer were synthesized for these studies. In addn., an epoxy-terminated monomer based on a 1,4-bis(benzoyloxy) phenylene mesogen was synthesized to det. the effect of the position of the mesogen on the final network structure. The diepoxy monomer made with Ph benzoate twin mesogens connected with an alkylene spacer formed a smectic-like network when cured with diamines. This smectic organization appeared even though the diepoxy monomer itself showed only a nematic mesophase over a narrow temp. range. The presence of crosslinks at both ends of the mesogens helped to retain a uniform spacing between crosslinking sites during the curing reaction, and aided formation of the smectic layer arrangement. The epoxy monomer possessing a 1,4-bis(benzoyloxy)phenylene mesogen and two epoxidized alkylene end groups on both sides of the mesogen formed a stable nematic mesophase. However, in contrast to the twin epoxies, the latter epoxy when reacted with diamines tended to produce a nematic-like network which was retained as the crosslinking reaction proceeded.

IT 177538-73-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate; synthesis and curing of novel LC twin epoxy monomers for liq. crystal thermosets)

RN 177538-73-7 HCAPLUS

CN Benzoyl chloride, 4-(5-hexenyloxy)- (9CI) (CA INDEX NAME)



CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 75

ST liq crystal twin epoxy thermoset; curing liq crystal epoxy thermoset

IT **Crosslinking**

(synthesis and curing of novel LC twin epoxy monomers for liq. crystal thermosets)

IT Epoxy resins, preparation  
Liquid crystals, polymeric

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis and curing of novel LC twin epoxy monomers for liq. crystal  
thermosets)

IT Chains, chemical

(network, synthesis and curing of novel LC twin epoxy monomers for liq.  
crystal thermosets)

IT 70856-68-7P 78644-15-2P 153881-42-6P 173844-49-0P 173844-50-3P  
177538-73-7P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(intermediate; synthesis and curing of novel LC twin epoxy monomers for  
liq. crystal thermosets)

IT 153881-44-8P 173844-51-4P 173844-52-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(monomer; synthesis and curing of novel LC twin epoxy monomers for liq.  
crystal thermosets)

IT 173844-53-6P 173844-54-7P 173844-55-8P 173844-56-9P 173844-57-0P  
173844-58-1P 173844-59-2P 177538-74-8P 177538-75-9P 177538-76-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(synthesis and curing of novel LC twin epoxy monomers for liq. crystal  
thermosets)

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L111 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:654685 HCAPLUS

DOCUMENT NUMBER: 123:128431

TITLE: Novel Ferroelectric and Electroclinic Organosiloxane Liquid Crystals

AUTHOR(S): Naciri, J.; Ruth, J.; Crawford, G.; Shashidhar, R.; Ratna, B. R.

CORPORATE SOURCE: Center for Bio/Molecular Science and Engineering, Naval Research Laboratory, Washington, DC, 20375, USA

SOURCE: Chemistry of Materials (1995), 7(7), 1397-402

CODEN: CMATEX; ISSN: 0897-4756

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

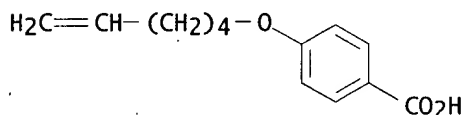
AB Organosiloxane ferroelec. liq. cryst. materials were synthesized, and their mesomorphic and phys. properties were characterized. The new series contains a siloxy chain attached to the hydrocarbon chain at the nonchiral end of the mol. All materials show a very low m.p. (<5.degree.) and exhibit chiral smectic A (SmA) and chiral smectic C (SmC\*) mesophases. The changes in the siloxy chain length strongly affect the mesomorphic behavior and electrooptic properties of these materials. Increasing the no. of siloxy units in the chain increases the temp. range of the SmA phase, and decreases the SmA-SmC\* transition temp. The electroclinic effect in the smectic A phase was characterized by a large electroclinic coeff. (.apprx.4 .degree.V-1 .mu.m-1 at T-TAC\* = 2.degree.) and low switching time (<40 .mu.s). One of the materials shows one of the highest value of spontaneous polarization Ps ever reported in the SmC\* phase for similar siloxane materials with Ps = 342 nC cm-2 at 25.degree..

IT 115595-28-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of)

RN 115595-28-3 HCAPLUS

CN Benzoic acid, 4-(5-hexenyloxy)- (9CI) (CA INDEX NAME)



CC 75-11 (Crystallography and Liquid Crystals)

Section cross-reference(s): 29, 73, 74, 76

ST organosiloxane ferroelec liq crystal

IT Electrooptical effect

(of organosiloxane ferroelec. liq. crystals)

IT Ferroelectricity

(of organosiloxane liq. crystals)

IT Piezoelectricity

(electroclinic effect, of organosiloxane liq. crystals)

IT Liquid crystals

(ferroelec., organosiloxanes)

IT Ferroelectric substances

(liq. crystals, organosiloxanes)

IT 115595-28-3

RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of)

- IT 101153-02-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and esterification of)
- IT 151080-63-6P 166331-72-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and hydrolysis of)
- IT 166331-74-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and hydrosilylation of)
- IT 166331-75-5P 166331-76-6P 166331-77-7P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and liq. crystal and phys. properties of)
- IT 166331-73-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and reaction with (decenyloxy)biphenylcarboxylic acid)
- IT 166331-71-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and reaction with heptanol)
- IT 119121-54-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and selective nitration of)

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L111 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1993:539921 HCAPLUS

DOCUMENT NUMBER: 119:139921

TITLE: Synthesis and characterization of novel epoxy monomers and liquid crystal thermosets

AUTHOR(S): Mallon, Joseph J.; Adams, Paul M.

CORPORATE SOURCE: Aerospace Corp., El Segundo, CA, 90245, USA

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1993), 31(9), 2249-60

CODEN: JPACEC; ISSN: 0887-624X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Four new epoxy monomers were synthesized and characterized as part of a program to prep. novel liq. crystal thermoset (LCT) materials. Three of the new epoxy monomers contained a biphenyl mesogen and were not liq. cryst. (LC). The remaining epoxy monomer, which contained a 1,4-dibenzoyloxybenzene mesogen, was synthesized in an overall yield of 30% and displayed a broad (83.degree.) nematic liq.-cryst. phase. The new liq.-cryst. epoxy monomer was cured at 120.degree. and postcured at 175.degree. with a stoichiometric amt. of 1,4-phenylenediamine. The thermal transitions of the resulting LCT were studied by DSC, polarized light optical microscopy, thermomech. anal., and wide angle x-ray diffraction as a function of cure time and temp. A process characterization diagram was constructed which showed that LCTs based on this new LC monomer can be processed in the liq. cryst. phase over a broad range of times and temps. Qual. agreement with previous epoxy LCT results was found, as LCT's with smectic phases and without clearing temps. were obsd. at long cure times (high crosslink densities), whereas nematic phases with clearing temps. predominated in networks at short cure times (low crosslink densities).

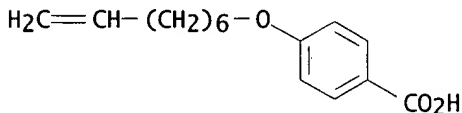
IT 110683-61-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction of, with hydroquinone)

RN 110683-61-9 HCAPLUS

CN Benzoic acid, 4-(7-octenyloxy)- (9CI) (CA INDEX NAME)



CC 35-7 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 37, 75

ST epoxy monomer prepn characterization; liq crystal thermoset epoxy resin; biphenyl contg epoxy monomer; dibenzoyloxybenzene contg epoxy monomer

IT Epoxy resins, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)

(liq.-cryst., prepn. and characterization of phenylenediamine-crosslinked)

IT Crosslinking

(of phenylenebis[(epoxyoctoxy)benzoate] homopolymer with phenylenediamine, liq. crystal properties in relation to)

IT Liquid crystals

(phenylenebis[(epoxyoctoxy)benzoate], prepn. and characterization of)

- IT Liquid crystals, polymeric  
(phenylenebis[(epoxyoctoxy)benzoate]-phenylenediamine copolymer, prepn.  
and characterization of)
- IT 134196-39-7P 134380-25-9P 149918-93-4P 149918-94-5P 149918-95-6P  
149918-96-7P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and characterization of)
- IT 149918-98-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and characterization of liq.-cryst.)
- IT 150000-06-9P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and properties of crosslinked liq.-cryst.)
- IT 149918-97-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and reaction of, with chloroperbenzoic acid)
- IT **110683-61-9P**  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and reaction of, with hydroquinone)
- IT 123-31-9, Hydroquinone, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with (octenoxy)benzoic acid)
- IT 2695-48-9, 8-Bromo-1-octene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with Et hydroxybenzoate)
- IT 1119-51-3, 5-Bromo-1-pentene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with biphenol)
- IT 937-14-4, m-Chloroperbenzoic acid  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with bis(pentenoxo)biphenyl)
- IT 120-47-8, Ethyl 4-hydroxybenzoate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with bromooctene)
- IT 92-88-6, [1,1'-Biphenyl]-4,4'-diol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with bromopentene)

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L111 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1992:427255 HCAPLUS

DOCUMENT NUMBER: 117:27255

TITLE: Side-chain liquid crystalline polymers with silphenylene-siloxane main chains. III. Synthesis and characterization of polymers with phenyl benzoate mesogenic groups

AUTHOR(S): Itoh, Maki; Lenz, Robert W.

CORPORATE SOURCE: Polym. Sci. Eng. Dep., Univ. Massachusetts, Amherst, MA, 01003, USA

SOURCE: Journal of Polymer Science, Part A: Polymer Chemistry (1992), 30(5), 803-12

CODEN: JPACEC; ISSN: 0887-624X

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Side-chain liq.-cryst. (SCLC) silphenylene-siloxane polymers with a Ph benzoate mesogenic group and polymethylene spacers were prep'd. and characterized, and their properties were compared with those of equiv. SCLC polymers, (SCLCP)s, with a biphenyl mesogenic group. With identical spacers and terminal substituents, the melting temps. of the former were much lower, but the isotropization temps. were lowered to a lesser extent, than those of the latter, and, consequently, a more thermally stable nematic phase was obtained for the former. Both types of SCLCPs formed nematic phases, while polymethylsiloxanes with the same side-chain mesogens exhibited smectic phases with wider temp. ranges. The lower thermal stability of the mesophases in the silphenylene-siloxane SCLCPs compared to those of the SCLC polymethylsiloxanes could be attributed to both the rigidity of the backbone and the greater sepn. of the side-chains along the main-chains of the former.

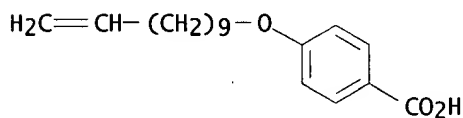
IT 59100-95-7P 110683-61-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. and reaction of, with thionyl chloride and hexyloxyphenol)

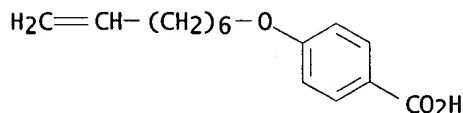
RN 59100-95-7 HCAPLUS

CN Benzoic acid, 4-(10-undecenylloxy)- (9CI) (CA INDEX NAME)



RN 110683-61-9 HCAPLUS

CN Benzoic acid, 4-(7-octenyloxy)- (9CI) (CA INDEX NAME)



CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36, 75

ST mesogenic side chain silphenylene siloxane; liq crystal silphenylene siloxane

- IT Crystal structure  
Polymer morphology  
(of side-chain liq.-cryst. silphenylene-siloxanes)
- IT Liquid crystals, polymeric  
(side-chain silphenylene-siloxanes, prepn. and characterization of)
- IT Heat of transition  
(nematic-smectic, of side-chain liq.-cryst. silphenylene-siloxanes)
- IT Siloxanes and Silicones, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(polysilphenylene-, liq.-cryst., side-chain, prepn. and characterization of)
- IT Polycarbosilanes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(polysilphenylenes, siloxane-, liq.-cryst., side-chain, prepn. and characterization of)
- IT Chains, chemical  
(side, structure of mesogenic, of liq.-cryst. silphenylene-siloxanes, properties in relation to)
- IT Molecular structure-property relationship  
(thermal stability, of side-chain liq.-cryst. silphenylene-siloxanes)
- IT 86893-07-4DP, reaction products with Me hydrogen siloxanes  
142109-91-9DP, reaction products with Me hydrogen siloxanes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(liq.-cryst., side-chain, prepn. and characterization of)
- IT 86893-07-4P 142109-91-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. and hydrosilylation of, with Me hydrogen siloxanes)
- IT 59100-95-7P 110683-61-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent)  
(prepn. and reaction of, with thionyl chloride and hexyloxyphenol)
- IT 99-96-7, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with bromoundecene)
- IT 7766-50-9, 11-Bromo-1-undecene  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with hydroxybenzoic acid)
- IT 7719-09-7, Thionyl chloride 18979-55-0, 4-Hexyloxyphenol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with vinyl monomers)

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L111 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1987:599025 HCAPLUS

DOCUMENT NUMBER: 107:199025

TITLE: Synthesis and chromatographic properties of liquid crystalline polysiloxanes containing steroid substituents

AUTHOR(S): Adams, Nathan W.; Bradshaw, Jerald S.; Bayona, Jose Maria; Markides, Karin E.; Lee, Milton L.

CORPORATE SOURCE: Dep. Chem., Brigham Young Univ., Provo, UT, 84602, USA

SOURCE: Molecular Crystals and Liquid Crystals (1987), 147, 43-60

CODEN: MCLCA5; ISSN: 0026-8941

DOCUMENT TYPE: Journal

LANGUAGE: English

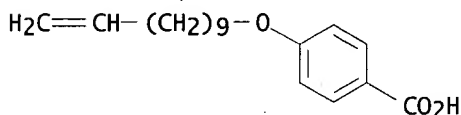
AB A series of liq.-cryst. alkenyl-substituted cholesterol and related steroids were prepd. and hydrosilylated onto Me hydrogen siloxane. The polymers had a broad range of liq. crystallinity even if the starting alkenes had a narrow range. Those polymers contg. the benzoate ester linking group were not suitable for stationary phases in high temp. capillary gas chromatog. because the phases were not stable at temps. >250-270.degree.. A capillary column coated with a polymer contg. a Ph group directly attached to the steroid proved to be effective in sepg. certain polycyclic arom. hydrocarbon isomers.

IT 59100-95-7P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and characterization of)

RN 59100-95-7 HCAPLUS

CN Benzoic acid, 4-(10-undecenyl)- (9CI) (CA INDEX NAME)



CC 35-7 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 36, 75

ST siloxane steroid contg liq crystal; chromatog stationary siloxane steroid contg; alkenyl cholesterol siloxane liq crystal

IT Steroids, compounds

RL: SPN (Synthetic preparation); PREP (Preparation)  
(hydrosilylation products with Me hydrogen siloxanes, liq.-cryst., prepn. and chromatog. properties of)

IT Phase transition

(in liq.-cryst. siloxanes contg. steroid substituents)

IT Hydrosilylation

(of alkenyl-substituted cholesterol and related steroids, with Me hydrogen siloxanes)

IT Liquid crystals

(siloxanes contg. steroid substituents, prepn. and chromatog. properties of)

IT Siloxanes and Silicones, preparation

RL: SPN (Synthetic preparation); PREP (Preparation)  
(Me hydrogen, contg. steroid substituents, liq.-cryst., prepn. and chromatog. properties of)

IT Chromatography, gas

(stationary phases, of liq.-cryst. siloxanes contg. steroid substituents)

- IT 83-46-5 83-48-7, Stigmasterol 2862-58-0, 5-Pregnen-3.beta.-ol  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, with allyloxybenzoyl chloride)
- IT 57-88-5, Cholesterol, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, with allyloxybenzoyl chloride or vinylbenzoyl chloride)
- IT 83953-73-5DP, hydrosilylation products with Me hydrogen siloxanes  
111252-06-3DP, hydrosilylation products with Me hydrogen siloxanes  
111252-07-4DP, hydrosilylation products with Me hydrogen siloxanes  
111252-08-5DP, hydrosilylation products with Me hydrogen siloxanes  
111252-09-6DP, hydrosilylation products with Me hydrogen siloxanes  
111252-10-9DP, hydrosilylation products with Me hydrogen siloxanes  
111252-11-0DP, hydrosilylation products with Me hydrogen siloxanes  
111252-12-1DP, hydrosilylation products with Me hydrogen siloxanes  
111275-92-4DP, hydrosilylation products with Me hydrogen siloxanes  
111275-93-5DP, hydrosilylation products with Me hydrogen siloxanes  
111310-72-6DP, hydrosilylation products with Me hydrogen siloxanes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(liq.-cryst., prepn. and chromatog. properties of)
- IT 59100-95-7P 76691-41-3P 83953-73-5P 111252-06-3P  
111252-07-4P 111252-08-5P 111252-09-6P 111252-10-9P 111252-11-0P  
111252-12-1P 111275-92-4P 111275-93-5P 111310-72-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and characterization of)
- IT 512-04-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with allyloxybenzoyl chloride)
- IT 80-97-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with allyloxybenzoyl chloride or vinylbenzoyl chloride)
- IT 26264-62-0, Cholestanone  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with allyloxybromobenzene or (undecenyl oxy)bromobenzene)
- IT 25244-30-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with cholestanone)
- IT 1565-41-9, 4-Vinylbenzoyl chloride 36844-51-6, 4-Allyloxybenzoyl chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with cholesterol)
- IT 51148-67-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with hydroxybenzoic acid)
- IT 99-96-7, 4-Hydroxybenzoic acid, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with undecenyl tosylate)
- IT 79-37-8, Oxalyl chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, with undecenyl oxybenzoic acid)

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L22	566	SEA FILE=REGISTRY	ABB=ON	PLU=ON	"DECENYLOXY"	} various alkenyl chain lengths
L23	881	SEA FILE=REGISTRY	ABB=ON	PLU=ON	"UNDECENYLOXY"	
L24	144	SEA FILE=REGISTRY	ABB=ON	PLU=ON	"DODECENYLOXY"	
L25	660	SEA FILE=REGISTRY	ABB=ON	PLU=ON	"OCTENYLOXY"	
L26	284	SEA FILE=REGISTRY	ABB=ON	PLU=ON	"HEPTENYLOXY"	
L27	1561	SEA FILE=REGISTRY	ABB=ON	PLU=ON	"HEXENYLOXY"	
L28	1259	SEA FILE=REGISTRY	ABB=ON	PLU=ON	"PENTENYLOXY"	
L29	3906	SEA FILE=REGISTRY	ABB=ON	PLU=ON	"BUTENYLOXY"	
L30	52785	SEA FILE=REGISTRY	ABB=ON	PLU=ON	"PROPENYLOXY"	
L31	13924	SEA FILE=REGISTRY	ABB=ON	PLU=ON	"ETHENYLOXY"	
L32	18307	SEA FILE=REGISTRY	ABB=ON	PLU=ON	(L22 OR L23 OR L24 OR L25 OR L26 OR L27 OR L28 OR L29 OR L30 OR L31) AND PMS/CI	} must be in a polymer 2 components
L33	(4301)	SEA FILE=REGISTRY	ABB=ON	PLU=ON	L32 AND NC=2	
L41	13631	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	CHROMATOGRAPHIC STATIONARY PHASES+PFT,NT/CT	
L42	45585	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	HPLC+PFT,NT/CT	
L62	157857	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	(SUPPORT OR PHASE) (2A) (SOLID OR STATIONARY)	
L65	4890	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L33 ← 4890 cites for L33 polymers	
L66	11	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L65 AND (L41 OR L42)	
L67	58	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L65 AND (CHIRAL? OR ENANTIOM? OR STEREOCHEM? OR ASYMMETRIC?)/OBI	
L68	5	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L67 AND L66	
L69	91	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L65(L) (SOLID OR SUPPORT OR BEAD OR L62)	
L70	7	SEA FILE=HCAPLUS	ABB=ON	PLU=ON	L69 AND (CHIRAL? OR ENANTIOM? OR STEREOCHEM? OR ASYMMETRIC?)/OBI	
<del>L71</del>	<del>2</del>	<del>SEA FILE=HCAPLUS</del>	<del>ABB=ON</del>	<del>PLU=ON</del>	<del>L70 NOT L68</del> → 2 citations	

L33 epds are polymers that have a  $-O-Ak-CH=CH_2$  unit

This was an experiment. the results may not be of any use

=&gt; d ibib abs hitstr ind 171 1-2

~~171~~ ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:670869 HCAPLUS  
 DOCUMENT NUMBER: 121:270869  
 TITLE: **Chiral** copolymers with oligosiloxane spacers  
 for chromatographic separations  
 INVENTOR(S): Bradshaw, Jerald S.; Rossiter, Bryant E.; Tarbet,  
 Bryon J.; Johnson, Deborah F.; Lee, Milton L.;  
 Markides, Karin E.  
 PATENT ASSIGNEE(S): Brigham Young University, USA  
 SOURCE: U.S., 30 pp. Cont. -in-part of U.S. Ser. No. 612,269,  
 abandoned.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5268442	A	19931207	US 1992-878157	19920504
US 5403898	A	19950404	US 1993-163870	19931207
PRIORITY APPLN. INFO.:			US 1990-612269	19901113
			US 1992-878157	19920504

AB Chiral copolymers contg. chiral mol. grooves or cavities and oligosiloxane spacers are disclosed. The chiral portion of the copolymer is an enantiomerically enriched org. grouping, having phys. properties attributed to uniform and stereochem. possible mol. grooves or cavities, which is chem. and thermally stable to gas, liq., or supercrit. fluid chromatog. conditions and is configured such that 1 enantiomer of an enantiomeric mixt. is better able to preferentially enter such groove or cavity and interact more strongly than other enantiomers in the mixt. The chiral grouping contains methylene, phenylene, naphthylene, biphenylene, binaphthylene, cyclodextrins, cycloalkylidenes, and/or their derivs. and also includes nonmetal atoms and functional groups which act as linking agents for the org. chiral cavity-contg. moieties, e.g., ethers, thioethers, amines, carbonyls, amides, esters, sulfoxides, sulfonates, thioamides, thioesters, ureas, thioureas, carbamates, thiocarbamates, phosphines, or phosphine oxides. The use of such polymers as chiral stationary phases in anal. and preparative gas, supercrit. fluid, and liq. chromatog. sepns., and particularly for anal. of enantiomeric and other stereoisomeric mixts. of various substances, is shown.

IT 158773-68-3DP, reaction product with 1-octene 158773-68-3P  
 158773-69-4DP, reaction product with 1-octene 158773-69-4P  
 158850-06-7DP, reaction product with 1-octene  
 158850-07-8DP, reaction product with 1-octene  
 RL: ANST (Analytical study); PREP (Preparation)  
 (prepn. of, as **stationary phase** for chromatog.  
 sepn.)

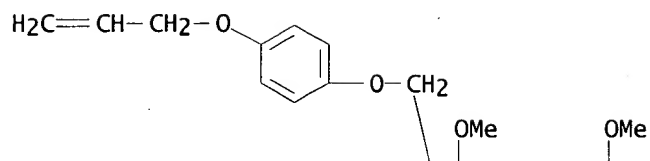
RN 158773-68-3 HCAPLUS  
 CN .beta.-Cyclodextrin, 6A,6B,6C,6D,6F-pentakis-O-(methoxymethyl)-  
 2A,2B,2C,2D,2E,2F,2G,3A,3B,3C,3D,3E,3F,3G-tetradeca-O-methyl-6E,6G-bis-O-  
 [4-(2-propenyloxy)phenyl]-, polymer with 1,1,3,3,5,5,7,7-  
 oxamethyltetrasiloxane (9CI) (CA INDEX NAME)

CM 1

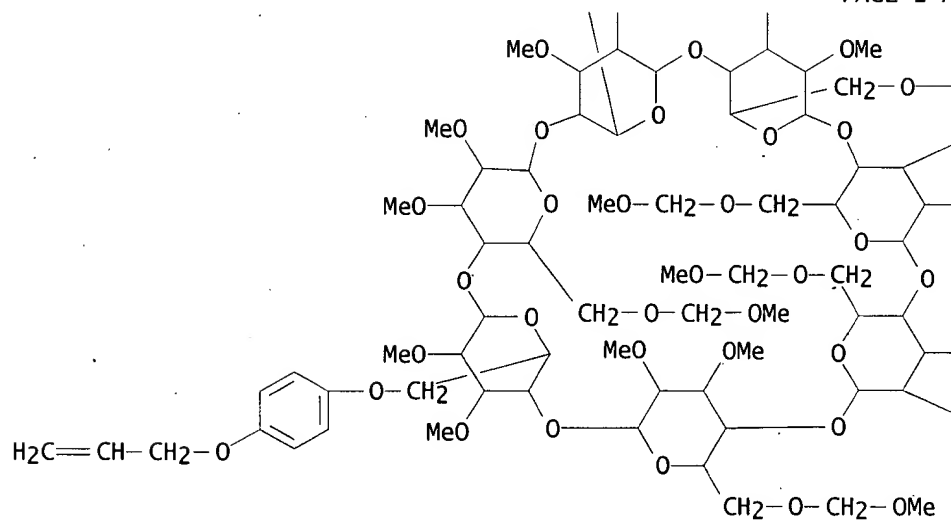
CRN 158773-67-2

CMF C84 H134 O42

PAGE 1-A



PAGE 2-A



—CH<sub>2</sub>—OMe

—OMe

—OMe

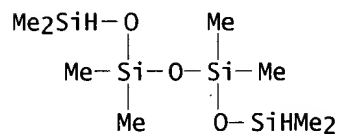
—OMe

—OMe

CM 2

CRN 1000-05-1

CMF C8 H26 O3 Si4



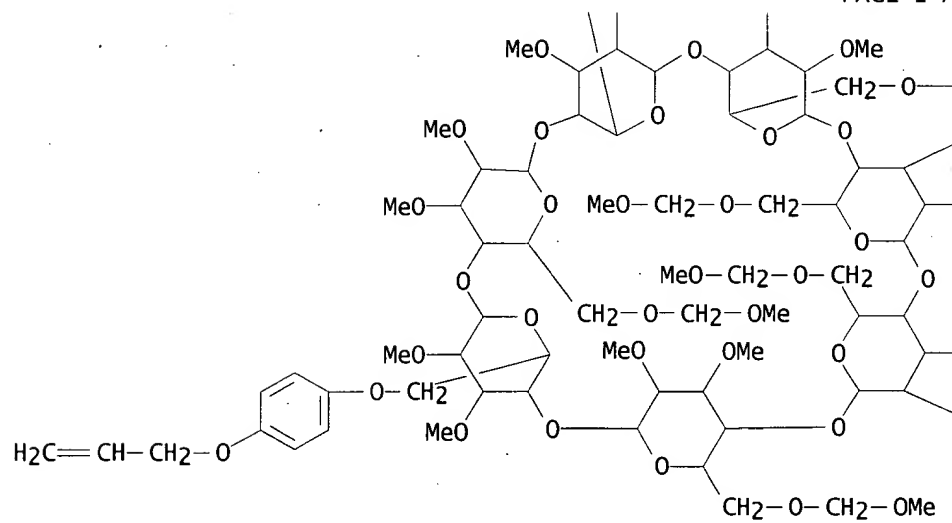
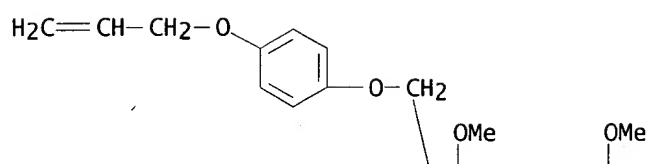
RN 158773-68-3 HCAPLUS

CN .beta.-Cyclodextrin, 6A,6B,6C,6D,6F-pentakis-O-(methoxymethyl)-  
2A,2B,2C,2D,2E,2F,2G,3A,3B,3C,3D,3E,3F,3G-tetradeca-O-methyl-6E,6G-bis-O-  
[4-(2-propenyloxy)phenyl]-, polymer with 1,1,3,3,5,5,7,7-  
oxamethyltetrasiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 158773-67-2

CMF C84 H134 O42



—CH<sub>2</sub>—OMe

—OMe

—OMe

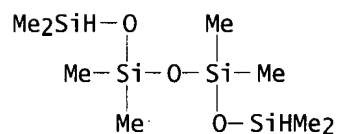
—OMe

—OMe

CM 2

CRN 1000-05-1

CMF C8 H26 O3 Si4



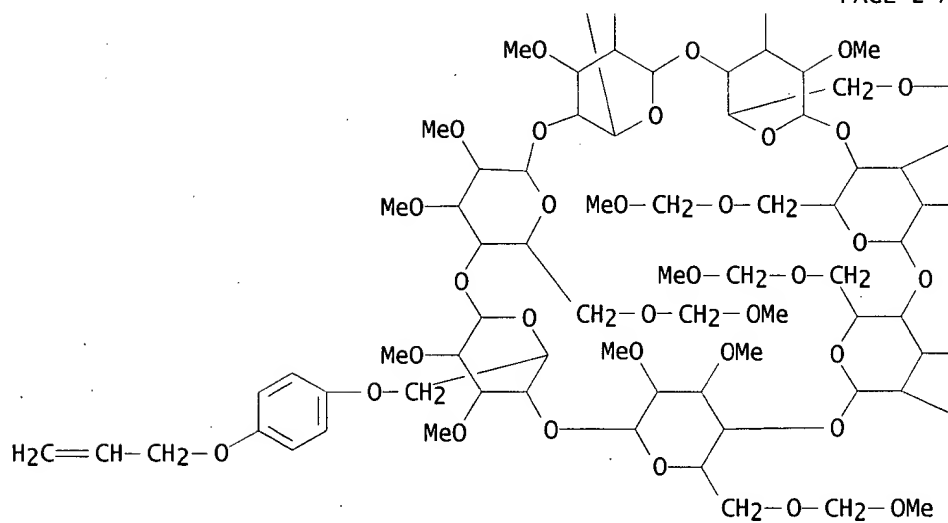
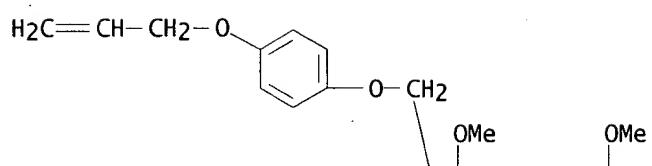
RN 158773-69-4 HCAPLUS

CN .beta.-Cyclodextrin, 6A,6B,6C,6D,6F-pentakis-O-(methoxymethyl)-  
 2A,2B,2C,2D,2E,2F,2G,3A,3B,3C,3D,3E,3F,3G-tetradeca-O-methyl-6E,6G-bis-O-  
 [4-(2-propenyloxy)phenyl]-, polymer with 1,1,3,3,5,5,7,7,9,9,11,11-  
 dodecamethylhexasiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 158773-67-2

CMF C84 H134 O42



—CH<sub>2</sub>—OMe

—OMe

—OMe

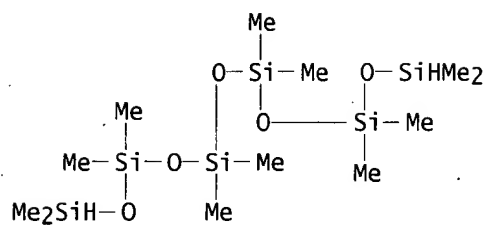
—OMe

—OMe

CM 2

CRN 995-82-4

CMF C12 H38 O5 Si6



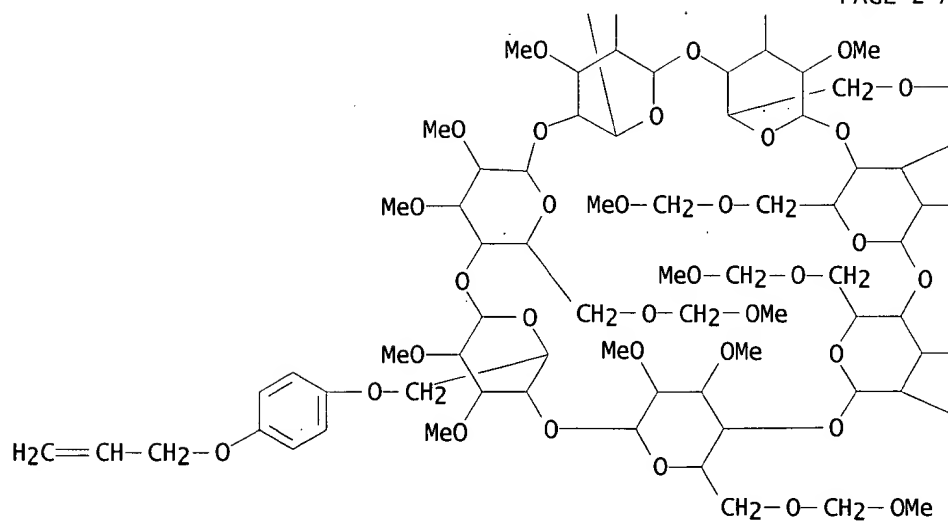
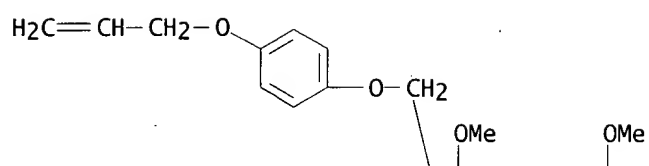
RN 158773-69-4 HCAPLUS

CN .beta.-Cyclodextrin, 6A,6B,6C,6D,6F-pentakis-O-(methoxymethyl)-  
 2A,2B,2C,2D,2E,2F,2G,3A,3B,3C,3D,3E,3F,3G-tetradeca-O-methyl-6E,6G-bis-O-  
 [4-(2-propenyloxy)phenyl]-, polymer with 1,1,3,3,5,5,7,7,9,9,11,11-  
 dodecamethylhexasiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 158773-67-2

CMF C84 H134 O42



—CH<sub>2</sub>—OMe

/OMe

—OMe

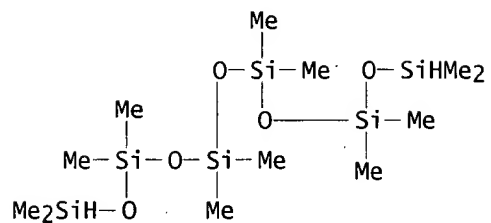
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CM 2

CRN 995-82-4

CMF C12 H38 O5 Si6



RN 158850-06-7 HCAPLUS

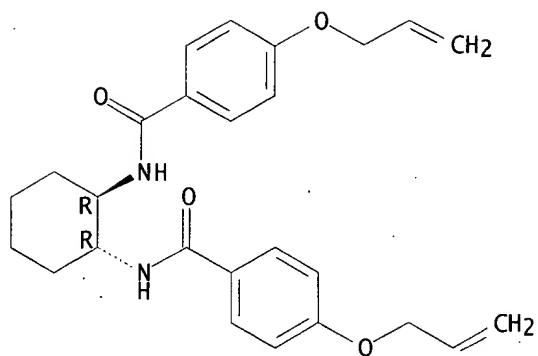
CN Benzamide, N,N'-1,2-cyclohexanediylbis[4-(2-propenyloxy)-, trans-, polymer with 1,1,3,3-tetramethyldisiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 158850-05-6

CMF C26 H30 N2 O4

Relative stereochemistry.



CM 2

CRN 3277-26-7  
CMF C4 H14 O Si2

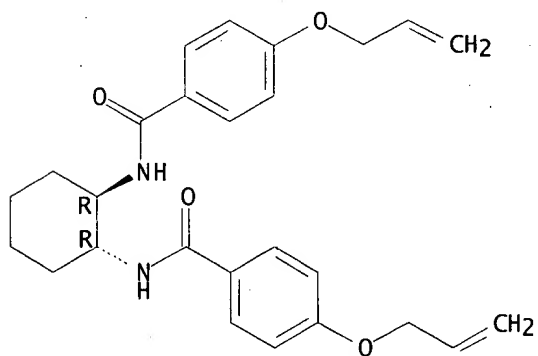
Me<sub>2</sub>SiH-O-SiHMe<sub>2</sub>

RN 158850-07-8 HCAPLUS  
CN Benzamide, N,N'-1,2-cyclohexanediylbis[4-(2-propenyloxy)-, trans-, polymer with 1,1,3,3,5,5,7,7-octamethyltetrasiloxane (9CI) (CA INDEX NAME)

CM 1

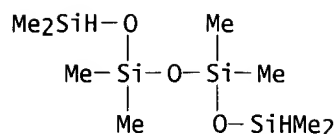
CRN 158850-05-6  
CMF C26 H30 N2 O4

Relative stereochemistry.



CM 2

CRN 1000-05-1  
CMF C8 H26 O3 Si4



IC ICM C08G077-04  
 NCL 528025000  
 CC 80-4 (Organic Analytical Chemistry)  
 Section cross-reference(s): 38, 66  
 ST **chiral** copolymer oligosiloxane spacer; chromatog sepn stationary  
 phase **chiral** copolymer; **enantiomeric** mixt chromatog  
 sepn **chiral** copolymer  
 IT Resolution  
 (chromatog., **chiral** copolymers with oligosiloxane spacers  
 for)  
 IT Siloxanes and Silicones, analysis  
 RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
 (polyether-, cardo; chromatog. stationary phases for sepn. of  
**enantiomers**)  
 IT 111-66-ODP, 1-Octene, reaction products with oligosiloxane-**chiral**  
 compd. copolymers 158773-56-9P 158773-57-OP 158773-59-2DP, reaction  
 product with 1-octene 158773-60-5P 158773-62-7DP, reaction product  
 with 1-octene 158773-63-8P 158773-65-ODP, reaction product with  
 1-octene 158773-66-1P 158773-68-3DP, reaction product with  
 1-octene 158773-68-3P 158773-69-4DP, reaction product  
 with 1-octene 158773-69-4P 158850-06-7DP, reaction  
 product with 1-octene 158850-07-8DP, reaction product with  
 1-octene  
 RL: ANST (Analytical study); PREP (Preparation)  
 (prepn. of, as **stationary phase** for chromatog.  
 sepn.)

L71: ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:44790 HCAPLUS

DOCUMENT NUMBER: 120:44790

TITLE: Chromatographic evaluation of **chiral**  
 (1R-trans)-N,N'-1,2-cyclohexylenebisbenzamide-  
 oligodimethylsiloxane copolymeric stationary phases  
 for capillary supercritical fluid chromatography  
 AUTHOR(S): Petersson, Patrik; Markides, Karin E.; Johnson,  
 Deborah F.; Rossiter, Bryant E.; Bradshaw, Jerald S.;  
 Lee, Milton L.

CORPORATE SOURCE: Dep. Anal. Chem., Uppsala Univ., Uppsala, S-751 21,  
 Swed.

SOURCE: Journal of Microcolumn Separations (1992), 4(2),  
 155-62

CODEN: JMSEEJ; ISSN: 1040-7685

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A novel approach to the design of chiral stationary phases (CSPs) is  
 illustrated by the synthesis and evaluation of selective and efficient  
 copolymeric CSPs with alternating chiral (1R-trans)-N,N'-1,2-  
 cyclohexylenebisbenzamide and achiral (oligodimethylsiloxane) blocks.  
 These materials are shown to resolve a variety of chiral diols.  
 Evaluation of the performance of one of these phases in GC and SFC  
 suggests that SFC can produce higher resoln. because of its lower  
 operating temp. which facilitates solute stationary phase interactions.

The influence of different chiral (position of substitution) and achiral (chain length) blocks of the copolymer on solute retention, efficiency, chiral selectivity, and resolu. were studied, as well as the reproducibility of the column prepn. method.

IT 135940-19-1 140715-25-9 140715-27-1

140715-29-3 140841-80-1

RL: ANST (Analytical study)

(as **chiral stationary phase** for capillary supercrit. fluid chromatog.)

RN 135940-19-1 HCAPLUS

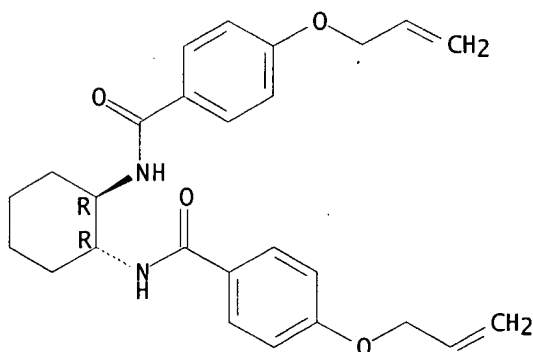
CN Benzamide, N,N'-1,2-cyclohexanediylbis[4-(2-propenyloxy)-, (1R-trans)-, polymer with 1,1,3,3,5,5,7,7-octamethyltetrasiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 135940-18-0

CMF C26 H30 N2 O4

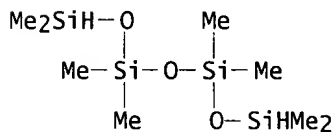
Absolute stereochemistry.



CM 2

CRN 1000-05-1

CMF C8 H26 O3 Si4



RN 140715-25-9 HCAPLUS

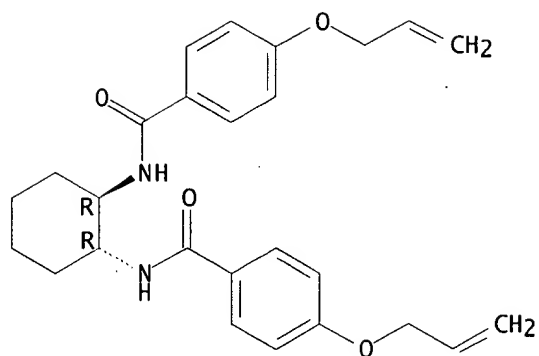
CN Benzamide, N,N'-1,2-cyclohexanediylbis[4-(2-propenyloxy)-, (1R-trans)-, polymer with 1,1,3,3-tetramethyldisiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 135940-18-0

CMF C26 H30 N2 O4

Absolute stereochemistry.



CM 2

CRN 3277-26-7  
CMF C4 H14 O Si2

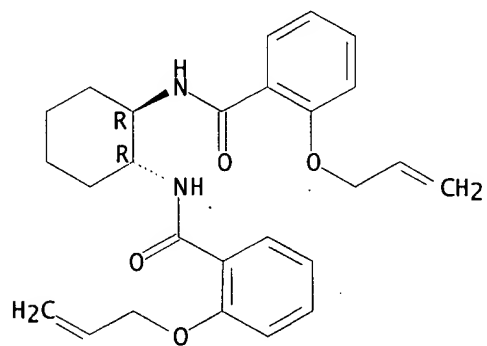
Me<sub>2</sub>SiH-O-SiHMe<sub>2</sub>

RN 140715-27-1 HCAPLUS  
CN Benzamide, N,N'-1,2-cyclohexanediylbis[2-(2-propenyloxy)-, (1R-trans)-, polymer with 1,1,3,3,5,5,7,7-octamethyltetrasiloxane (9CI) (CA INDEX NAME)

CM 1

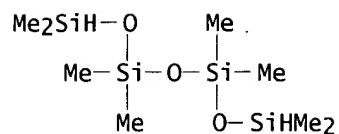
CRN 140715-26-0  
CMF C26 H30 N2 O4

Absolute stereochemistry.



CM 2

CRN 1000-05-1  
CMF C8 H26 O3 Si4



RN 140715-29-3 HCAPLUS

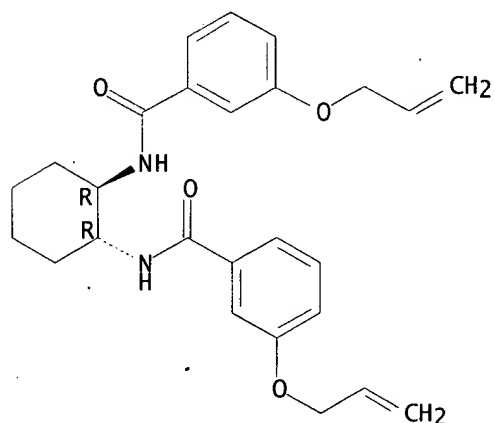
CN Benzamide, N,N'-1,2-cyclohexanediylbis[3-(2-propenyloxy)-, (1R-trans)-, polymer with 1,1,3,3,5,5,7,7-octamethyltetrasiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 140715-28-2

CMF C26 H30 N2 O4

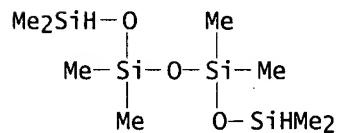
Absolute stereochemistry.



CM 2

CRN 1000-05-1

CMF C8 H26 O3 Si4



RN 140841-80-1 HCAPLUS

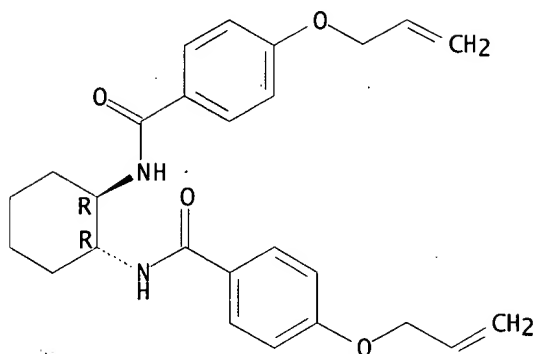
CN Benzamide, N,N'-1,2-cyclohexanediylbis[4-(2-propenyloxy)-, (1R-trans)-, polymer with 1,1,3,3,5,5,7,7,9,9,11,11-dodecamethylhexasiloxane (9CI) (CA INDEX NAME)

CM 1

CRN 135940-18-0

CMF C26 H30 N2 O4

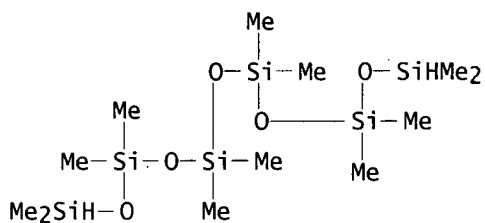
Absolute stereochemistry.



CM 2

CRN 995-82-4

CMF C12 H38 O5 Si6



- CC 80-4 (Organic Analytical Chemistry)
- ST cyclohexylenebisbenzamide oligodimethylsiloxane copolymeric stationary phase SFC; supercrit chromatog cyclohexylenebisbenzamide oligodimethylsiloxane copolymeric phase; diol resoln supercrit fluid chromatog
- IT Siloxanes and Silicones, uses  
 RL: ANST (Analytical study); USES (Uses)  
 (cyclohexanediamide-contg., as **chiral** stationary phase for capillary supercrit. fluid chromatog.)
- IT Glycols, analysis  
 RL: ANST (Analytical study)  
 (enantiomeric resoln. of, by capillary supercrit. fluid chromatog. on **chiral** cyclohexylenebisbenzamide oligodimethylsiloxane copolymeric stationary phases)
- IT Resolution  
 (chromatog., supercrit. fluid, on **chiral** cyclohexylenebisbenzamide oligodimethylsiloxane copolymeric stationary phases)
- IT 135940-19-1 140715-25-9 140715-27-1  
 140715-29-3 140841-80-1 140841-81-2  
 RL: ANST (Analytical study)  
 (as **chiral stationary phase** for capillary supercrit. fluid chromatog.)
- IT 57968-71-5, (.+-.)-Diethyl tartrate 91049-44-4, (.+-.)-3,3-Dimethyl-1,2-butanediol 151858-87-6 151910-43-9

RL: ANST (Analytical study); PROC (Process)  
 (enantiomeric resolu. of, by capillary supercrit. fluid  
 chromatog. on **chiral** cyclohexylenebisbenzamide  
 oligodimethylsiloxane copolymeric stationary phases)

IT 87-91-2, (+)-Diethyl tartrate 13811-71-7 31612-63-2,  
 (-)-3,3-Dimethyl-1,2-butanediol 92621-91-5, (+)-3,3-Dimethyl-1,2-  
 butanediol 139165-60-9 151910-41-7 151910-42-8 151910-44-0

RL: ANST (Analytical study); PROC (Process)  
 (sepn. of, from **enantiomer** by capillary supercrit. fluid  
 chromatog. on **chiral** cyclohexylenebisbenzamide  
 oligodimethylsiloxane copolymeric stationary phases)

IT 130932-14-8 136031-99-7 151910-45-1 151910-46-2

RL: ANST (Analytical study); PROC (Process)  
 (sepn. of, from stereoisomer by capillary supercrit. fluid chromatog.  
 on **chiral** cyclohexylenebisbenzamide oligodimethylsiloxane  
 copolymeric stationary phases)

Looking for 239 cpds (from search) that are  
chiral - but maybe not part of a stationary  
phase

KRISHNAN 09/541,690

Unique 1129

L1 SCR 2004 AND 1707 AND 1838  
L2 SCR 970  
L3 STR

CH2=CH-Ak-O-Cb  
46 7 8 9 10

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 8  
CONNECT IS E2 RC AT 10  
DEFAULT MLEVEL IS ATOM  
GGCAT IS UNS AT 10  
DEFAULT ECLEVEL IS LIMITED  
ECOUNT IS M2 C AT 8  
ECOUNT IS E6 C AT 10

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 5

STEREO ATTRIBUTES: NONE

L4 2405 SEA FILE=REGISTRY SSS FUL L3 AND L1 AND L2  
L9 STR

CH2=CH-Ak-O-Cb-G3  
46 7 8 9 10 15

Cb @3 N=C=O  
@16 17 18

O @25

O=C-N-N-N  
19 @20 21 47 48

O=C-G4  
22 @23 24

N=C=S  
@28 27 26

CH2-G1  
@29 30

37  
O  
O-S-G5  
@31 32 33

VAR G1=X/31  
VAR G3=16/20/23/28/NH2/29  
VAR G4=X/25  
VAR G5=3/ME

NODE ATTRIBUTES:

CONNECT IS E2 RC AT 8  
CONNECT IS E2 RC AT 10  
CONNECT IS E2 RC AT 17  
CONNECT IS E1 RC AT 25  
CONNECT IS E2 RC AT 27  
CONNECT IS E1 RC AT 37  
DEFAULT MLEVEL IS ATOM  
GGCAT IS UNS AT 3  
GGCAT IS UNS AT 10  
DEFAULT ECLEVEL IS LIMITED  
ECOUNT IS M6 C AT 3  
ECOUNT IS M2 C AT 8  
ECOUNT IS E6 C AT 10

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 28

Same  
STR  
search

## STEREO ATTRIBUTES: NONE

L11 49 SEA FILE=REGISTRY SUB=L4 SSS FUL L9  
 L12 47 SEA FILE=REGISTRY ABB=ON PLU=ON L11/COM  
 L39 123 SEA FILE=HCAPLUS ABB=ON PLU=ON L12  
 L41 13631 SEA FILE=HCAPLUS ABB=ON PLU=ON CHROMATOGRAPHIC STATIONARY  
 PHASES+PFT,NT/CT  
 L42 45585 SEA FILE=HCAPLUS ABB=ON PLU=ON HPLC+PFT,NT/CT  
 L43 48797 SEA FILE=HCAPLUS ABB=ON PLU=ON CROSSLINKING/CT  
 L44 24051 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYMER CHAINS+NT/CT  
 L45 6207 SEA FILE=HCAPLUS ABB=ON PLU=ON CHEMICAL CHAINS/CT  
 L47 5205 SEA FILE=HCAPLUS ABB=ON PLU=ON CHIRALITY/CT  
 L48 736 SEA FILE=HCAPLUS ABB=ON PLU=ON CHIRAL RECOGNITION+OLD/CT  
 L49 74603 SEA FILE=HCAPLUS ABB=ON PLU=ON STEREOCHEMISTRY+PFT,NT/CT  
 L50 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (L47 OR L48 OR L49)  
 L51 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (L41 OR L42)  
 L54 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (L44 OR L45)  
 L55 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L54 AND (CHIRAL? OR ENANTIOM?  
 OR STEREOCHEM? OR ASSYMETRIC OR RESOLUTION)  
 L56 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 AND L39  
 L58 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND L50  
 L74 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND HYDROSILYLAT?/OBI  
 L76 109 SEA FILE=HCAPLUS ABB=ON PLU=ON L39(L) (RACT OR RCT)/RL  
 L77 8 SEA FILE=HCAPLUS ABB=ON PLU=ON L76 AND L74  
 L79 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L76 AND SILYLAT?/OBI  
 L80 9 SEA FILE=HCAPLUS ABB=ON PLU=ON L77 OR L79  
 L105 412248 SEA FILE=HCAPLUS ABB=ON PLU=ON POLYSACCHARIDES+PFT,NT/CT  
 L106 147008 SEA FILE=HCAPLUS ABB=ON PLU=ON OLIGOSACCHARIDES+PFT,NT/CT  
 L107 286437 SEA FILE=HCAPLUS ABB=ON PLU=ON MONOSACCHARIDES+PFT,NT/CT  
 L108 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (L105 OR L106 OR  
 L107)  
 L109 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 AND (?STARCH OR ?CYCLOEXT  
 RIN OR ?CELLULOSE OR ?DEXTRIN)  
 L110 3 SEA FILE=HCAPLUS ABB=ON PLU=ON (L108 OR L109)  
 L111 16 SEA FILE=HCAPLUS ABB=ON PLU=ON L51 OR (L55 OR L56) OR L58 OR  
 L80 OR L110  
 L128 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L39(L) (CHIRAL? OR ENANTIOM?  
 OR STEREOCHEM? OR ASSYMETRIC? OR RESOLV? OR RESOLUTION)  
 L129 2 SEA FILE=HCAPLUS ABB=ON PLU=ON L128 NOT L111

all the  
 results from  
 L51, L55-56  
 58, L80,  
 L110

subtract L111 from  
 L128 to  
 avoid  
 duplicates  
 of L111

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L129 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1996:637561 HCAPLUS

DOCUMENT NUMBER: 125:301888

TITLE: Chiral smectic liquid crystalline siloxanes

INVENTOR(S): Hsu, Chain-shu; Lin, Jhy-horung; Shih, Li-jen; Hsiue, Ging-ho

PATENT ASSIGNEE(S): National Science Council, Taiwan

SOURCE: U.S., 70 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5563230	A	19961008	US 1994-303748	19940909
PRIORITY APPLN. INFO.:			US 1994-303748	19940909

AB A chiral smectic liq. cryst. polymers comprise

TMS[MeSi(RR'nOArCO<sub>2</sub>Ar'OCH<sub>2</sub>CHMeEt)O]<sub>m</sub>TMS (m is 40-80; n is 1-12; R is ethylene or trimethylene; R' is methylene; Ar is -C<sub>6</sub>H<sub>4</sub>XC<sub>6</sub>H<sub>4</sub>X- wherein X is chlorine or hydrogen; Ar' is phenylene or phenylenecarbonyl). The polymers are typically prepd. by hydrosilylation of hydrogen siloxanes with specified unsatd. mesogenic compds. Polymethylhydrogensiloxane was hydrosilylated with 4-((S)-2-methyl-1-butoxy)phenyl 4-(3-buten-1-yloxy)biphenyl-4'-carboxylate to give a liq. crystal polymer.

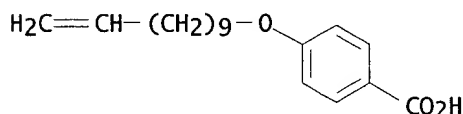
IT 59100-95-7P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(chiral smectic liq. cryst. siloxanes)

RN 59100-95-7 HCAPLUS

CN Benzoic acid, 4-(10-undecenyl)- (9CI) (CA INDEX NAME)



IC ICM C08G077-14

ICS C09K019-52; C09K019-12

NCL 528025000

CC 35-6 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 75

ST chiral smectic liq. cryst. siloxane

IT Siloxanes and Silicones, preparation

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
(mesogenic group-contg.; chiral smectic liq. cryst. siloxanes)

IT Liquid crystals, polymeric

(chiral smectic, chiral smectic liq. cryst. siloxanes)

IT 9004-73-3DP, Methylhydrogensiloxane, reaction products with mesogenic compds. 49718-23-2DP, Methylsilanediol homopolymer, reaction products with mesogenic compds. 144512-89-0DP, reaction products with hydrogen siloxanes 144512-90-3DP, reaction products with hydrogen siloxanes 144512-91-4DP, reaction products with hydrogen siloxanes 144512-92-5DP, reaction products with hydrogen siloxanes 144512-93-6DP, reaction

products with hydrogen siloxanes 148357-84-ODP, reaction products with hydrogen siloxanes 148357-85-IDP, reaction products with hydrogen siloxanes 148357-86-2DP, reaction products with hydrogen siloxanes 183237-26-5DP, reaction products with hydrogen siloxanes 183237-27-6DP, reaction products with hydrogen siloxanes 183237-28-7DP, reaction products with hydrogen siloxanes 183237-29-8DP, reaction products with hydrogen siloxanes

RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
(chiral smectic liq. cryst. siloxanes)

IT 1119-51-3P, 5-Bromo-1-pentene 2695-47-8P, 6-Bromo-1-hexene 5162-44-7P, 4-Bromo-1-butene 15075-50-OP, 2-(2-Allyloxy)ethoxy ethanol 38261-81-3P 50563-72-9P 51148-67-5P, 10-Undecen-1-yl tosylate **59100-95-7P** 84183-96-OP 84183-97-1P 85394-10-1P 93001-09-3P, 4-Allyloxybiphenyl-4'-carboxylic acid 93001-10-6P, 4-(4-Penten-1-yloxy)biphenyl-4'-carboxylic acid 95880-51-6P 108606-34-4P, 116394-41-3P 123598-57-2P, 4-(5-Hexen-1-yloxy)biphenyl-4'-carboxylic acid 144512-97-OP 148357-81-7P 148357-82-8P 148357-83-9P 149969-35-7P 151419-76-OP, 4-(10-Undecen-1-yloxy)biphenyl-4'-carboxylic acid 183237-25-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(chiral smectic liq. cryst. siloxanes)

IT 98-59-9 103-16-2, Hydroquinone monobenzylether 106-95-6, Allylbromide, reactions 110-52-1, 1,4-Dibromobutane 111-24-0, 1,5-Dibromopentane 111-46-6, Diethylene glycol, reactions 112-43-6, 10-Undecen-1-ol 556-56-9, Allyl iodide 629-03-8, 1,6-Dibromohexane 1565-80-6, (S)-(-)-2-Methylbutanol 1608-26-0, Hexamethyl-phosphorous triamide 58574-03-1, 4-Hydroxybiphenyl-4'-carboxylic acid

RL: RCT (Reactant); RACT (Reactant or reagent)

(chiral smectic liq. cryst. siloxanes)

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L129 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1995:683234 HCAPLUS

DOCUMENT NUMBER: 123:199567

TITLE: Synthesis of Ferroelectric Liquid Crystalline Polysiloxanes Having a Chiral n-Alkyl Tolansulfinate as the Pendant Group

AUTHOR(S): Mery, Stephane J.; Nicoud, Jean-Francois; Guillon, Daniel

CORPORATE SOURCE: Groupe des Materiaux Organiques, Institut de Physique et Chimie des Materiaux, Strasbourg, 67037, Fr.

SOURCE: Macromolecules (1995), 28(16), 5440-9

CODEN: MAMOBX; ISSN: 0024-9297

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The synthesis and mesomorphic properties of a series of ferroelec. liq.-cryst. polysiloxanes bearing chiral 4-[(4-((n-alkyloxy)sulfinyl)phenyl)ethynyl]phenyl 4-(undecyloxy)benzoate as mesogenic pendant groups are presented. In these polymers, the chirality is introduced via an asym. sulfur atom. The synthesis of the materials was possible through three successive polymer-analogous reactions. The last key synthetic step is the polyesterification of the poly((undecyloxy)benzoic acid-methylsiloxane) with the n-alkyl 4-[(4-hydroxyphenyl)ethynyl]benzenesulfinate derivs., which could be carried out efficiently. Up to 97% overall substitution rates of the siloxane units by the mesogenic moiety could thus be obtained. The results of the preliminary investigations of the ferroelec. properties, carried out in the SC\* phase of one polymer, were also reported. Finally, the comparison of the mesomorphic properties of a sulfinate-based polymer and mol. with their carboxylate-based counterparts is briefly reviewed.

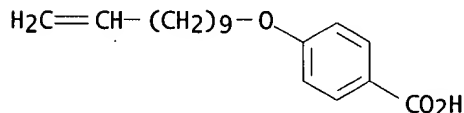
IT 59100-95-7, 4-(10-Undecenyl)benzoic acid

RL: RCT (Reactant); RACT (Reactant or reagent)

(in prepn. of alkyl hydroxytolansulfinate and tolancarboxylate for chiral ferroelec. liq.-cryst. siloxanes)

RN 59100-95-7 HCAPLUS

CN Benzoic acid, 4-(10-undecenyl)- (9CI) (CA INDEX NAME)



CC 35-6 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 75

ST ferroelec liq crystal polysiloxane tolansulfinate

IT Ferroelectric substances

Liquid crystals, polymeric

(tolansulfinate-contg.; prepn. of chiral ferroelec. liq.-cryst. siloxanes)

IT 59100-95-7, 4-(10-Undecenyl)benzoic acid 164986-01-0, n-Octyl 4-[(4-hydroxyphenyl)ethynyl]benzoate

RL: RCT (Reactant); RACT (Reactant or reagent)

(in prepn. of alkyl hydroxytolansulfinate and tolancarboxylate for chiral ferroelec. liq.-cryst. siloxanes)

IT 164986-13-4P

- RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(in prepn. of alkyl hydroxytolansulfinate and tolancarboxylate for chiral ferroelec. liq.-cryst. siloxanes)
- IT 106-41-2, 4-Bromophenol 1066-54-2, (Trimethylsilyl)acetylene  
6192-52-5, p-Toluenesulfonic acid monohydrate 150508-72-8  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in prepn. of alkyl hydroxytolansulfinate for chiral ferroelec. liq.-cryst. siloxanes)
- IT 36603-49-3P 119754-16-4P 164986-02-1P 164986-03-2P 164986-04-3P  
164986-07-6P 164986-09-8P 164986-10-1P 164986-11-2P 168024-27-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(in prepn. of alkyl hydroxytolansulfinate for chiral ferroelec. liq.-cryst. siloxanes)
- IT 164986-14-5P 164986-15-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and characterization of optically active)
- IT 9004-73-3DP, Methylsilanediol homopolymer, sru, reaction products with tolansulfates and tolancarboxylates 49718-23-2DP, Methylsilanediol homopolymer, reaction products with tolansulfates and tolancarboxylates 164986-01-ODP, reaction products with (undecyloxy)benzoic acid-contg. Me hydrogen siloxanes 164986-09-8DP, reaction products with (undecyloxy)benzoic acid-contg. Me hydrogen siloxanes 164986-10-1DP, reaction products with (undecyloxy)benzoic acid-contg. Me hydrogen siloxanes 164986-12-3DP, reaction products with (undecyloxy)benzoic acid-contg. Me hydrogen siloxanes 164986-16-7DP, reaction products with Me hydrogen siloxanes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of chiral ferroelec. liq.-cryst. siloxanes)
- IT 164986-05-4P 164986-08-7P 164986-12-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(racemate; in prepn. of alkyl hydroxytolansulfinate for chiral ferroelec. liq.-cryst. siloxanes)
- IT 164986-11-2DP, reaction products with (undecyloxy)benzoic acid-contg. Me hydrogen siloxanes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(racemate; prepn. of chiral ferroelec. liq.-cryst. siloxanes)